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OBSERVATIONS

ON

LIVE STOCK.

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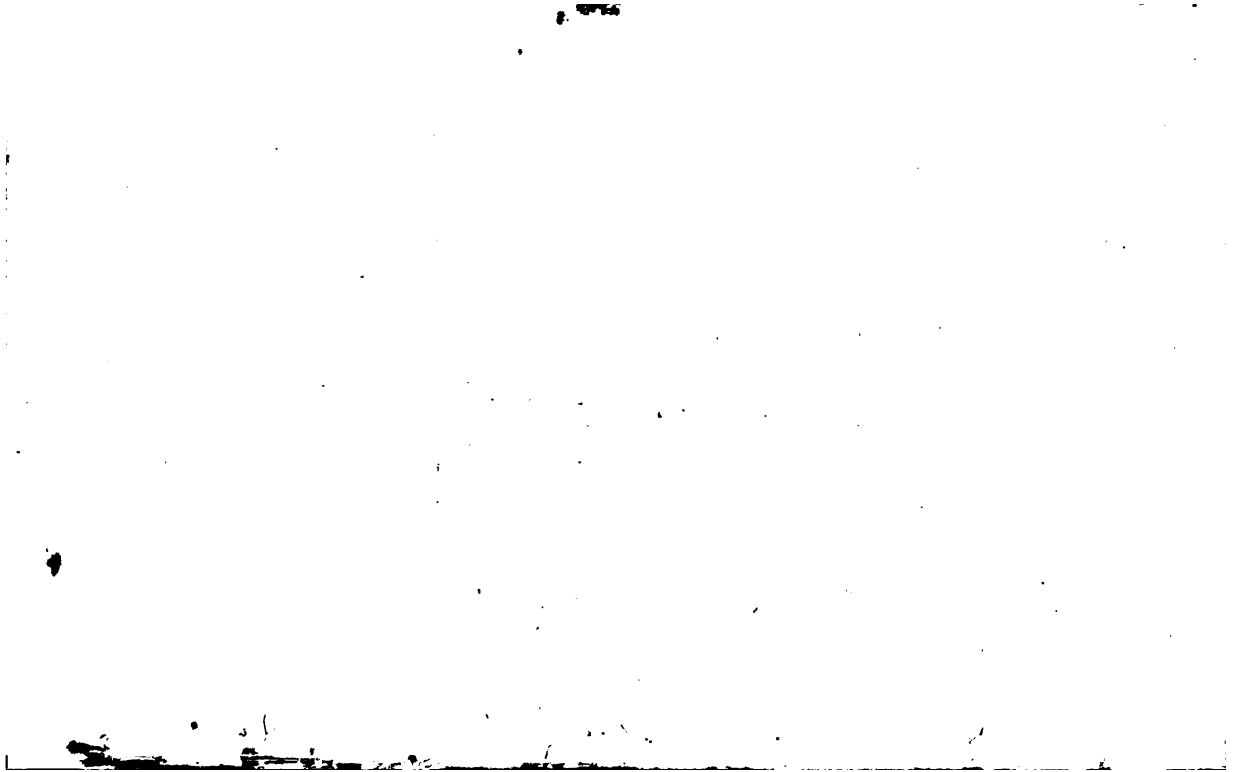

OBSERVATIONS

ON

LIVE STOCK:

CONTAINING

HINTS FOR CHOOSING AND IMPROVING

THE BEST BREEDS OF THE MOST USEFUL KINDS

OF

DOMESTIC ANIMALS.

BY GEORGE CULLEY,
Farmer in Northumberland, Eng.

TO WHICH IS ADDED,

SOME OBSERVATIONS RESPECTING THE CATTLE IMPORTED INTO AMERICA, IN 1792, BY ROBERT HEATON, OF THROG'S NECK, WESTCHESTER COUNTY, STATE OF NEW-YORK.

NEW-YORK:

PRINTED AND PUBLISHED BY D. LONGWORTH,
AT THE SHAKSPEARE-GALLERY.

1804.

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TO THE AMERICAN EDITION.

BEEF being a staple product of the northern parts of the United States, it is an object of the highest importance to improve our breeds of cattle; it was therefore thought it would be of advantage to our farmers to have some idea of the methods used by the english breeders to improve their cattle; they having made themselves famous of late years for raising the finest stock in the world. The following treatise was recommended to the publisher to be re-printed for the purpose of giving information to our farmers respecting the improvements in England; it is now published, and he hopes it will be of service to his countrymen.

When the printing commenced, it was the intention of the publisher to give some account of the breeds of cattle in America, and of the particular improvements made of late years by spirited breeders in the different States; but the difficulty of obtaining correct information on the subject, has hindered him from doing it.

to his satisfaction at present—he does not despair, however, of doing it at some future day; and he would be very thankful for any information relating thereto, which may be transmitted to him by gentlemen farmers, and others who may feel themselves interested in such a publication.

The statement respecting mr. Heaton's cattle added to this edition, will be found highly interesting to the american breeder.

New-York, August, 1804.

CONTENTS.

INTRODUCTION - - - - 5
Description of the horse, with an account of the different breeds of that useful animal - - - - - 16
Description of the Bull, with an account of the various breeds of neat Cattle - - - - - 13
OF SHEEP - - - - - 40
Description of the ram - - - 41
and of the different breeds of sheep 42
Remarks on beef and mutton when exposed to sale in pieces on the stall 80
Of the folding of Sheep - - - 70
Floating, flooding, and watering grass-grounds recommended - - 73
OF SWINE - - - - - 76
Remarks on the inattention of the irish with respect to their breeds of Sheep, &c.
General remarks on the size of the foregoing domestic animals - 83
OF RABBITS and other animals of less note - - - - - 89
Of Rabbits - - - - - 89
Of Mules, Asses and Goats - - 90
Of Deer - - - - 91
Of Poultry - - - - 92

APPENDIX, NO. I.
An account of the names of domestic animals at different ages - - 93

CONTENTS.

APPENDIX, NO. II.
Of the time they shed their teeth, and the rules for knowing their age 96
Observations on the above - - 98

APPENDIX, NO. III.
Observations on the cattle imported into America, by mr. Heaton, in the year 1792. - - - - - 110

OBSERVATIONS

ON

LIVE STOCK.

IT has been matter of surprise to me, that none of our countrymen have hitherto attempted to write a treatise expressly upon what farmers call STOCK; by which I mean those domestic animals with which our fields, our yards, and stables, are, or ought to be stored, such as horses, cattle, sheep, and swine; the knowledge of which, I apprehend, is at this period of improvement, as necessary for the farmer, as the well cultivating of a field for wheat, barley, turnips, or any other crop. For, according to the present improved system of farming, there is such a connection between the cultivation of the ground, and the breeding, rearing and fattening of cattle, sheep, and other domestic animals, that a man will make but an indifferent figure in rural affairs, if he does not understand the latter as well as the former.—Our shelves are loaded with volumes that have been written upon agriculture, while but little has been said upon those very useful animals referred to above. Conscious of my own inability to undertake so important, though necessary a task, I repeatedly solicited some of my acquaintance, who I believed to be well able to perform it; and in par-

ticular one whom it is not necessary here to name for whose abilities I have the highest respect, whose life has been employed in breeding and improving stock, and who has carried it to very great perfection, from the experience and close application of his whole life, spent in the pursuit of breeding useful stock: but being unable to prevail upon him to write on this subject, I shall venture to offer my own thoughts in the best manner I am able, from the hopes that this may induce some abler person to write upon this hitherto almost unbeaten track, for the good of mankind, and particularly for the benefit of my brother breeders.

It may be necessary to observe, that though a late writer* has given us very learned descriptions of the bull, horse, and ram, &c. yet it does not appear he has treated of these matters near so fully as the nature and importance of the subject requires. His language is not altogether so plain, nor adapted to the education of many of our farmers, as it ought to be: he is far too concise in regard to the different breeds of sheep belonging to this island, and has said nothing at all relative to the various breeds of cattle: and besides, though his descriptions have much merit, yet I shall venture to differ from him in some particulars concerning the shape of cattle and sheep, which will be pointed out in their proper places.—As I do not profess any great share of knowledge in regard to horses, I shall consequently say less concerning them than the other kinds of stock, with which I have been more conversant, and to which I have paid more attention, particularly sheep. However, as horses are universally allowed to be amongst the most useful animals of the creation, we shall give them the first place in our narration.

*Clark's *Theory of Husbandry.*

In regard to the horse, then, I presume his head should be as small as the proportion of the animal will admit; his nostrils expanded, and muzzle fine; his eyes cheerful and prominent; his ears small, upright, and placed near together; his neck rising out of his back and shoulders with an easy tapering curve, must join gracefully to the head; his shoulders being well thrown back, must also go into into his neck (at what is called the points) unperceived, which perhaps facilitates the going much more than the narrow shoulder, which most people are admirers of; for, whoever, has observed a greyhound or a hare, will perceive how very wide they are made at the upper part of the shoulders, and there are few animals that move with so much ease and swiftness as they do. The arm, or fore thigh, should be muscular, and tapering from the shoulder, meet with a fine straight sinewy boney leg; the hoof circular, and wide at the heel; his chest deep and full at the girth; his loins or fillets broad and straight, and ribs round; his hips or hooks, by no means wide, but quarters long, and tail set high on; his thighs strong and muscular; his legs clean and fine boned; the leg-bones not round, but what is called lathy.

It is generally thought that we only have two original breeds of horses in this island, viz: the race or blood kind, and the black cart-breed: the rest have been supposed to be only variations from these two, introduced by repeated crossings, and yet we are struck with surprise, when we consider the difference between the gigantic drayhorse, eighteen hands high, stalking upon the London pavements, and the small Highland, or Shetland poney, tripping over the mosses with a heavy load, though not more than nine hands, or thirty-six inches high when at his full

growth. I shall decline saying any thing of the blood-horses: First, because I know very little concerning them; and, secondly, because I think farmers ought to have little or nothing to do with them, except now and then putting a good mare to a strong well-proportioned blood-horse, by way of mixing a little blood amongst our chapmen or riding horses. Perhaps for some particular uses even a plough-horse may not be the worse for having a little blood in him, as it is termed; and every man, I apprehend, who has rode five hundred miles upon horseback, will admit, that a horse which has a little blood in him, will usually perform a pleasanter day's work, than one that has little or none of the racing breed in him: for, notwithstanding objections have been made by late writers to the crossing of breeds of animals, I cannot help being of a different opinion; because, from many years experience, I have much reason to believe that great improvements have been, and may be made by crossing*, not only amongst the diffe-

* *What I mean by crossing, is to put the best male of the same species, or of different varieties of the same kind, to the best females; so as by repeated crosses in this way, you have improved your breed as far as you can. This I think is clearly right, as long as better males can be met with among your neighbors—amongst the improved breeds in any part of this island; or why not from those in any part of the world, provided the expense does not exceed the proposed advantage? for I have no notion of setting bounds to improvements of any description. It quickens that laudable desire of excelling our rivals which leads us to discoveries of the highest importance,—discoveries which in every period have so eminently marked the genius and enterprising spirit of this blessed island. Then, when you can no longer at home or abroad, meet with better males than your*

rent kinds of horses, but neat cattle (horned or black cattle as they have been differently called) and sheep; and I apprehend it is from these crosses, properly made, that this island has been long famous for such a noted and excellent breed of saddle-horses, insomuch that great numbers are almost every year bought up for France and other parts of the continent. If crossing was not of use, even amongst the blood-race, why should gentlemen of the turf be at the trouble, and very great expense, in procuring stallions from Arabia, and different parts of Turkey, &c. Nay, the well-attested pedigrees of most of our race-horses, I perceive, generally terminate with a Burton Barb, or Place's White Turk. &c. which is a proof that these crosses have been attended with success.

The breed of saddle-horses is confined in a great measure to Yorkshire, Durham, and Northumberland: the east riding of Yorkshire has been long eminent in that line. The annual fairs held at Northallerton, Howden, and York, exhibit the largest shows of these useful creatures: perhaps it may be owing to this that Yorkshiremen are all called jockeys, or knowing hands in regard to horses; and indeed you will scarce meet with a farmer in that country, especially in the low part of it, who is not well skilled in horses. Since bay and other light-going horses,

own, breed from these, whether horses, neat cattle, sheep, &c. for the same rule that holds good in one kind, will in another. But upon no account attempt to breed or cross from worse than your own, for that would be acting in contradiction to common sense, experience, and that well-established rule, viz. 'that best only can beget best.' Allow me to add, that from the best males and females only, the best breeds can be obtained.

have been preferred to the black breed for carriages, the Yorkshire breeders have gone so much upon these, that I am informed the old breed of riding or saddle-horses are much worn out. This is owing, perhaps, not only to the greater demand for the latter, but also to the coach-horses being a stronger and larger breed; as also, if they happen, from blemishes, not to answer for the harness, they suit for the plough or cart; while the saddle-horse, from the same misfortunes, is rendered in a great measure useless.

The midland counties, particularly Leicestershire, Warwickshire, Staffordshire, and Derbyshire, breed almost altogether of the black kind. It is the universal custom in those counties, for the farmers to use mares only for labor: these are all put to the horse, the male produce of which supply the army, London, and most of the south and western counties with horses for their farming-teams. The largest go to the capital, for dray-horses; the next supply the farmers in the southern counties, for their waggons, ploughs, &c. and the rest mount our cavalry, or are trained to the carriages, while a few of the choicest are very properly preserved for stallions.

The vanity of many of the farmers in the south, in regard to their teams, is most extraordinary. I have, in Berkshire, and that neighborhood, several times met a narrow-wheeled waggon, with six stone-horses, one before another; the first horse, besides having on a huge bridle, covered with fringe and tassels enough to half-load a common Yorkshire cart-horse, has six bells hung to it, the next five, and so on to the last, which has only one; and it is really diverting to see with what a conceited air the driver struts and brandishes his long whip.—A strange con-

trast this with the poor highlander carting home his peats for winter-fuel, when frequently both horse and cart are not of the same value as the harness used to a Berkshire waggon-horse. The reader will be the less surprised, when I assure him, that I have in Scotland many times seen a horse and cart conveying peats or turves, when the whole apparatus neither contained iron, leather, or hemp; the collar or bracham was made of straw, the back-band of platted rushes, and the wheels of wood only, without bush of metal, or binding of iron.

One of the earls of Huntington returning from an embassy to the states-general, brought home with him a set of coach-horses of the black breed from the continent. Most of these being stallions, he with some difficulty prevailed upon his tenants by the Trent-Side, to put their mares to them; which cross answered so well, that the breed in that neighborhood has been in the greatest repute ever since. This, many years afterwards, induced Mr. Bakewell, and another Leicestershire breeder, to cross the german ocean in search of horses and mares, to improve the english breed; and after much labor and expense they returned with half-a-dozen dutch or Flanders mares. And I have often heard mr. Bakewell say, that he never met with a man but he could have prevailed upon him to part with his stock for money, except in Holland, where he met with a dutch boor, who would not sell one of his mares for any price which mr. Blakewell thought worth his while to give; and any body who knows the above great breeder, will be sensible that he would not limit for price, who gave above seventy guineas, when beginning business, for a cart-mare to breed from. Notwithstanding these dutch mares were of use in improving the Lei-

cestershire black breed, yet it perhaps scarce answered the end proposed; because, by this time, the heavy unwieldy black horses were growing into disrepute; the nobility and gentry were begun to run bay-horses in their carriages; light horses were more used in the army than heretofore; but, above all, the spirited industry and activity in farming, required horses of more mettle than those already mentioned; but they yet are, and probably will ever be, valuable for drays and waggons.—But, how would the norfolk farmers sow two, three, or four hundred acres of turnips upon one farm, in proper time, in the same season, and plough two, or near three acres per day with one pair of horses, if they had them not from a hardier and nimbler breed than those alluded to? It is long since I was told by the Cleveland farmers, that the black horses could not stand to their work, and could not go at the rate of their own country horses; that whenever they were put past their pace, they greased, and frequently went blind: yet it is in this industrious part of Yorkshire, and in Norfolk, Suffolk, &c. that we must look for farming-horses able to go through fatigue and hardship, able to walk at a pace that the others cannot, and able to work six days in every week in the year. It is a well-known fact, that these will, upon an average, wear as long again as the rough-legged gummy black breed.

But let us not forget to do justice to a northern district in this island, that produces as good a farming-horse as any of these alluded to —I mean the west of Scotland: they are in general greys or browns; but from whence they had the breed, I know not: and though I must allow that they are plain made in general, about the head, sides, and hind-legs, yet it is a fact

founded upon experience, that we have not a hardier race in the island.

The best and most hardy horses for the draught I ever remember seeing, proceeded from a cross between the country mares by the Tee's side, and a stallion brought from Holstein: they are not tall horses, rising only from about fourteen hands three inches, to fifteen hands three inches, exceedingly strong made, with short clean-boned legs, very firm carcasses, and equal to any fatigue.

The welch have a very hardy breed of horses, but rather small for the team; but where they are good goers, few or none equal them for the road; none stand our turnpikes like them: and I well remember one that I rode for many years, and to the last he would have gone upon a pavement by choice, in preference to softer road.

The scotch horses, like the welch, are exceedingly hardy, but too small for the draught, except the clydesdale horses, &c. taken notice of before. Those properly called galloways, are now rare to be met with, from an inexcusable inattention to the breed, which is nearly lost. The breed originated, as we may suppose, from the name galloway, and it is generally said was owing to crossing with the spanish horses, when a part of the invincible armada was shipwrecked upon those rocky coasts. There is much probability in the account; but whether true or not, is not so material as the loss of so valuable a breed of little horses is to be lamented.

NEAT CATTLE.

DESCRIPTION OF THE BULL.

The head of the bull should be rather long; his muzzle fine, and nostrils wide; his eyes live-

ly and prominent; his ears long and thin; his horns white; his neck strong and rising rather from the shoulders, but small and fine where it joins the head; his shoulders broad at the top, yet to sit full to his crops and chest backwards, and to his neck vein, putt or mouse-piece forwards; his bosom open, breast deep, broad, and well seen before his legs; his arms or forethighs full, and tapering to his knees; his legs straight, clean, and very fine boned, with good large hoofs; his crops and chest so full as to leave no hollow behind the shoulders, and so strong in the plates as to keep his belly from sinking below the level of his breast; his back or loin broad, straight, and flat; ribs well up (as the graziers term it), i. e. one rising above another, in such a manner as the last rib should be rather the highest, which should leave only a small space to the hips or hooks; these should be wide placed, round, and full in shape; the quarters long, tail high, rumps close; and the quarters, instead of being square, as recommended by some writers on husbandry, should taper gradually from the hips backward; the tuffs or pottbones quite sunk, and in every respect different from the round, lyery, or dutch form, so undeservedly esteemed formerly. The form here described, will, when fed, be covered with fat to the hock or hough; the bones of his hindlegs same as those before, viz. clean, small, and straight; tail broad, and well-haired.

Though I said that probably we only had two original breeds of horses in this island, yet I apprehend we have several different breeds of cattle, viz. the long-horned, or Lancashire kind; the short-horned, or dutch kind; the polled, humbled, or galloway breed; the kiloes, or scotch cattle; the aldernay, or french breed; and the

wild breed which are still preserved by some of our nobility in their parks, and perhaps some others I may not be acquainted with.

The welch breed of cattle I take to be much the same as the scotch; and as to the Herefordshire brown cattle, they are, I am pretty clear, neither more nor less than a mixture between the welch and a bastard race of long-horns, that are every where to be met with in Cheshire, Shropshire, &c. *

We shall treat of all the different breeds separately, then endeavor to point out the perfections and imperfections of each kind, compare them with each other, and then offer our opinion in regard to which are best, and most suitable to different situations.

First, then, in regard to the long-horned, or Lancashire kind.—This kind is distinguished from the others by the length of their horns, thickness of their hides, long thick hair all over them, and having mostly a white streak along their back, and a white streak on the middle of the hock or hough. The oxen are called in many places Lancashire hornpipes, I suppose from the remarkable length of their horns†.

* *I am told, that besides the species I have treated of, there are two more very useful breeds in this island, viz. one in Sussex, valuable both for the draught and feeding quality; the other in Devonshire, also very good feeders: but as these are two of the few counties which I have not yet had it in my power to visit, I think it would be wrong in me to say any thing respecting their breeds of cattle.*

† *The reverend mr. Norton, an ingenious and intelligent gentleman, whom I met with lately at Hinkley in Leicestershire, tells me, the neat cattle in the Azores are long horned, and in every respect the same as our Lancashire breed, only less in size; and*

Many people will have it that they are the native or original breed of the island. It is not easy to ascertain this matter; but if I may venture a conjecture, I think it is highly probable that these have been the inhabitants of the open plain country; while the wild breed, or perhaps the welch, (which I take to be nearly the same as the scotch) possessed the mountainous hilly wild parts of this island. However, Lancashire at present, and for a long time past, has as much right to be called the mother-country for long-horned cattle, as Lincolnshire has to the large long-wooled sheep; for, though all or most of our cheese-dairies in Cheshire, Gloucestershire, &c. employ a kind of long-horned cows, and indeed the greatest part of the midland counties, yet they are only a shabby mixed breed, much inferior in size and figure to the Lancashire breed, from whence it is very probable they all originated. Leicestershire, Warwickshire, &c. have got a better and more profitable sort of long-horns than Lancashire at present, by buying up their best bulls and heifers for many years past, before the people of Lancashire were well aware of it. Indeed the former paid more attention to that kind, which were of a true mould or form, consequently quicker feeders;

will have it, that ours might have come originally from these islands. But, on considering this matter over, with submission to mr. Norton, I cannot help thinking that the neat cattle in the Azores, are as likely to be descended from our long-horns, as ours from these; and perhaps might be taken to these islands form Britain by some enterprising navigator, for the same reason and from the same laudable motive that our most excellent circumnavigator capt. Cook took many domestic animals to the islands in the South-sea, which he had the honor to discover.

while the latter contented themselves with the old-fashioned, large, big-boned kind, which was not only slower feeders, but, when fed, are not such good eating beef. In short, the little farmers in Lancashire, tempted with the high prices given them for their best stock, had lost their valuable breed before they were quite sensible of it.

As I may often have occasion, in this treatise, to mention mr. Bakewell, from the superior manner in which he has distinguished himself in the breeding of cattle and sheep, I would beg leave, by a short digression, to point out some of the principal advantages this gentleman's breed of stock has over those that were in greatest repute before his day. For he absolutely struck out new lights, and not only adopted a breed of cattle and sheep, different from, and superior in many essential respects to most others, but established them in such a manner as to gain ground in every corner of Great Britain and Ireland, in consequence of their superior merit.

The kind of cattle that were most esteemed before mr. Bakewell's day, were the large, long-bodied, big-boned, coarse, gummy, flat-sided kind, and often lyery or black-fleshed. On the contrary, this discerning breeder introduced a small, clean-boned, round, short-carcassed, kindly-looking cattle, and inclined to be fat; and it is a fact, that these will both eat less food in proportion, and make themselves sooner fat than the others: they will in truth pay more for their meat in a given time, than any other sort we know of in the grazing way. His sheep are still more excellent than his cattle; but as we shall have occasion to speak of these afterwards, I will only add, that perhaps this gentle-

man was the principal cause of the Lancashire people losing their best breed; but then he also was the means of establishing a much more advantageous one in Leicestershire.

There are several more eminent breeders in that spirited part of the island, where they have carried the breeding of useful stock to a pitch unknown in former days, and what other parts of the island have still only a very faint idea of. Mr. Bakewell well deserves the thanks of his country, for promoting the breeds of useful domestic animals;—This gentleman, by his laudable example, has not only improved the breeding of good stock near home, but has spread it every where within those islands. The Irish breeders have given him very large prices for his bulls: mr. Bakewell keeps great numbers, and has let several for one season, as high as from twenty to sixty guineas each, into different parts of Britain.

The short-horned breed of cattle, is the next to be described; and it is pretty evident that our forefathers have imported these from the continent: First, because they are still in many places called the dutch breed: Secondly, because we find these cattle no where in this island, except along the east coast, facing those parts of the continent where the same kind of cattle are still bred; and reaching from Lincolnshire southwards, to the borders of Scotland northwards. The long-horns and these have met upon the mountains which divide Yorkshire from Lancashire, &c. and, by crossing, they have produced a mixed breed called half-long-horns; a very heavy, strong, and not very useful kind of cattle; but we do not find that the one kind have spread further west, nor the others east. But, thirdly, I remember a gentle-

man of the county of Durham (a mr. Michael Dobison) who went in the early part of his life into Holland, in order to buy bulls; and those he brought over, I have been told, did much service in improving the breed: and this mr. Dobison, and his neighbors even in my day, were noted for having the best breeds of short-horned cattle, and sold their bulls and heifers for very great prices. But afterwards, some other people of less knowledge going over, brought home some bulls that in all probability introduced into that coast the disagreeable kind of cattle, well known to the breeders upon the river Tees, and called lyery, or double-lyered, that is, black-fleshed, for one of these creatures, notwithstanding it will feed to a vast weight, and though you feed it ever so long, yet will not have one pound of fat about it, neither within nor without*; and the flesh (for it does not deserve to be called beef) is as black and coarse grained, as we generally suppose horse-flesh to be. However, by the pains and attention of the breeders, this useless disagreeable breed is now pretty well out of the country. No man will buy one of this kind, if he knows any thing of the matter; and if he should be once taken in, he will remember it well for the future; for people conversant with cattle very readily find them out, from their round form all over, particularly their buttocks, which are turned like

* *I once saw one of this sort killed, which, after feeding all summer, had not a pound of fat, inside nor out; but I confess it was one of the completest of the kind I ever saw. Its two ends, viz. shoulders and buttocks, were heavy, round, and course, without any hip-bones at all standing up, and the body quite small; in short, it was more like an ill-made black horse, than an ox or cow.*

a black coach-horse, and the smallness of the tail: But they are best known to the graziers and dealers in cattle, by the feel or touch of the fingers; and indeed it is this nice touch or feel of the hand, that in a great measure constitutes the judge of cattle—but more of this afterwards.

The Yorkshire firkin butter so famous in the London markets, and their skimmed-milk cheese are all made from the cows of this breed; for they give the most milk of any kind of cows we know of, though it is generally said not to be so good in quality as the long-horned cows milk; and though the cheeses made from long-horned cows, fetch the highest price at market, yet the firkin butter made from the short-horns has the best character.

Our heaviest and largest oxen, when properly fed, victual the East India ships: as they produce the thickest beef, consequently keeps in the juices, and suits best for such long voyages. Our royal navy should also be victualled from these: but, by the jobs made by contractors, and the abuses lately crept in, our honest tars, I am afraid, are often fed with flesh rather than valuable beef. However, the coal-ships from Newcastle, Shields, Sunderland, &c. are totally supplied from the beef of these valuable animals. These oxen in common, feed to from 60 to 100 stone weight, 14 lb. to the stone; and they have several times been fed to 120, 130, and some particular ones to 140 stone the four quarters only. Sir Thomas Haggerstone, of Haggerstone in Northumberland, perhaps bred and fed the two largest and heaviest oxen of this or any other breed then shewn in this kingdom. The judges allowed them to weigh 140 stone each; however, their real weight was not known, as sir Thomas, or his steward, I am

told, sold them to two butchers, who attempted to drive them to Edinburgh to shew them alive for money by the head; but I understand, the one dropped down dead on the road, and the other in Edinburgh, or between that place and Glasgow, from their excessive fat, and inability to travel,—or rather from the want of judgment or neglect in the drivers. Since sir Thomas Haggerstone's oxen were killed, mr. Hill, of Blackwell near Darlington in the county of Durham, in the year 1779, had an ox killed, of his own breeding and feeding, whose four quarters weighed 151 stone and 10 lb. 14 lb. to the stone: and which I believe exceeded any ox ever fed in this island, for either fat, weight, or beauty.

This breed of cattle, like most others, is better and worse in different districts; not so much owing, I apprehend, to the goodness or badness of the ground, as to the judgment and attention of the breeders.—In Lincolnshire,* (which is the farthest south that we meet with any quantity of this kind of cattle), they are in general more subject to lyer or black flesh, than those bred farther north: and in that rich flat part of Yorkshire called Holderness, they are much the

* *In a journey through Lincolnshire last Autumn 1784, I was happy to find that many of those sensible breeders had improved their breed of short-horned cattle very much (since my visiting that fine country ten years before) from good bulls and heifers brought from the county of Durham and Yorkshire, on both sides of the river Tees, where the best are confessedly bred, especially mr. Fisher of Kirkby near Sleaford, who has remarkable fine cattle indeed, shewed me one ox entirely white, which I thought the handsomest and heaviest I ever had seen, mr. Hill's excepted.*

same as south of the Humber of which we have been speaking. It is probable they had stuck more to the lyery, black-beefed dutch breed, than their more northern neighbors, at that unfortunate period when these were imported from the continent, or perhaps the latter had seen their error sooner. But, from whatever cause this happened, it is a fact, that as soon as we cross the Yorkshire Wolds northward, we find this breed alter for the better:—they become finer in the bone, in the carcase, and in a great measure free from that disagreeable lyery sort, which has brought such an odium upon this perhaps most valuable breed. When you reach that fine country on both sides of the river Tees, you are then in the centre of this breed of cattle—a country that has been long eminent for good stock of all kinds—the country where the Dobisons first raised a spirit of emulation amongst the breeders, which is still kept up by mr. Hill, mr. Charges, mr. Collings, mr. Maynard, &c. The Darlington and Yarm annual fairs still continue to send out large droves of fine oxen, steers, and queys.

I am sorry to observe, that there are fewer steers kept to be oxen now, than used to be formerly. Two reasons may be assigned for this:—First, lands are now rented at so high a pitch, that farmers cannot afford to keep steers to the age of oxen, without working them:—which brings me to my second reason, viz. that fewer oxen are used in the draught now than formerly. And a remedy for this complaint perhaps may not be so readily pointed out; because, though a few people are convinced of the utility of drawing oxen in many cases, yet the generality of farmers will be very unwilling to be persuaded to this, because oxen are slower in their motion than horses, without adverting to

the advantages attending the oxen in the feeding, shoeing, harness, &c, but above all, the conclusion (between an ox fatted for the shambles, after working three or four years, or indeed a lean ox sold to feed, and a horse sold to the dog-kennel) is so exceedingly striking, that I presume most people, when they reflect upon this very important matter, will agree to the prawing of oxen in every kind of work wherein they suit. I use the expression SUIT because I would not be understood to think, as some people do, that oxen will answer as well as horses in every kind of farming work; by no means:—. But I apprehend, that oxen will do several kinds of home work equally as well as horses. I advance this opinion from several years experience: and I do believe, that most farmers might use part oxen along with their horses; but permit me to say, that I would in general recommend the oxen to draw by themselves, and the horses by themselves, because the difference of step does not suit at all.

Much more might be said upon this important subject, but I must not now enter upon it; and will only add, that I heartily wish our legislature would take this matter into consideration, and give premiums to encourage the rearing and drawing of oxen, and also to promote the breeding of the best kinds of stock, as there is little doubt but it would have most beneficial effects. It is true that many of our agricultural societies do give premiums for the above purposes; but these though highly meritorious, are only partial, and confined to certain districts, while the influence of the other would be general and extensive.

The north part of Durham, all Northumberland, and a few places in the south of Scotland,

are almost the only places in this island where any number of oxen are now kept to age. Part of these are bought by the drovers to go south, for grazing; the rest are fed at home, to supply the coal-trade. It is true they draw a few oxen in Herefordshire, and some of the western counties*; but those of Lancashire, Yorkshire, &c. are now mostly sold at three, four, or at most five years old, steers and oxen.

The Polled or Humbled Cattle come next under our consideration,—a kind well deserving of notice. We find a few of these straggling through different parts of England and Scotland: amongst the rest, I remember lord Darlington, not many years ago, had a very handsome breed of them, finely globed with red and white. But we must look for the original of these in Galloway, a large district in the south-west of Scotland. They are mostly bred upon the moors or hilly country, and grazed upon the lands nearer the sea, until part of them are rising four, and others five years old, when the graziers and drovers take them up in prodigious numbers to the fairs in Norfolk and Suffolk†, previous to the turnip feeding seasons; from whence they are again removed in the winter and spring, in part to supply the amazing consumption of the capital, where they are readily sold, and at high prices; for, few or no cattle sell so high in Smithfield-market, being such nice cutters up, and laying the fat on upon the most valuable

* *In Sussex, I believe, and perhaps in Devonshire they draw oxen; but, as I said before, I am unacquainted with these two counties.*

† *The principal fairs are Woolpit in Suffolk, Hempton-green, Harleston, and Saint-faiths in Norfolk.*

parts; and this is a great excellence in all feeding cattle. It is no uncommon thing in this refined market, to see one of these little bullocks outsell a coarse Lincolnshire ox, though the latter be heavier by several stones weight.*

The manner of rearing calves in Galloway, is so singular, and so different from any thing of the kind that I had before seen or heard of, that I hope the mentioning of it here will not be objected to. They are allowed to run with their dams all the day; but are prevented from sucking, by means of a small piece of leather with sharp spikes of iron fixed upon the outside, tied upon the upper part of the calf's nose, which prickling the cow every time the calf attempts to suck, prevents her from letting it suck; until the milk-maid comes, when she takes off the muzzle from the little animal's nose, and while she strips two of the teats, the calf takes care to empty the other two. As soon as the maid has done, she fixes on the instrument again; but it is done in such a manner as not to hinder the calf from feeding upon the grass, though it is not allowed to taste the milk until the girl returns to her milking.

I do not recollect whether they do it in Galloway, but I have observed that it is the general practice through Scotland, to milk their cows in summer three times in the day. In Galloway they spay more queys than perhaps in all the island besides; and in this too their methods are different from any other part I am acquaint-

* *I was told by a Lincolnshire grazier, that a Lincolnshire bullock, and a scotch bullock, sent from the same village to Smithfield, at the same time were sold for exactly the same money, though the scot was only half the other's weight.*

ed with, for they do not cut them until they are a year or near a year old; whereas in every other place I know, the quey calves are spayed from one to three months old: and indeed it is now generally admitted as the safest practice, to castrate calves and lambs, male or female, while very young.

I find the breeders in Galloway, like most other breeding countries in these kingdoms, complain of their old breed being lost, or at least much worn out. That there may be some truth in these complaints, I will not take upon me to deny:—but perhaps there may be other reasons which in some measure contribute to lead people in this way of thinking. In this age of improvement, I apprehend we examine more narrowly: we distinguish with more perspicuity, and consequently we judge more nicely. We are not content now, with judging by one of our senses, as I believe used to be the case, viz. by looking on slightly; but we now join the sense of feeling to seeing. The farmer of this day is not ashamed to learn from the butcher to feel with the fingers, that touch-stone of knowledge, in regard to the judging of animals already prepared, or to be prepared for the shambles. We undoubtedly first judge by the sight; which being pleased, we bring the sense of feeling to its assistance* ;—and if this also approves, we then conclude that the animal suits our purpose, or is answerable to the idea we had formed of it.

* *A nice or good judge of cattle and sheep, with a slight touch of the fingers upon the points of the animal, viz. the hips, rumps ribs, flank, breast, twist, shoulder-score, &c. will know immediately whether it will make fat or not, and in which parts it will be the fattest, &c.*

From these, and such like reasons, I have been induced to believe that breeders and graziers are misled, or mistaken at least in a great measure, respecting the breeds of cattle, &c. being lost, and of cattle, sheep, &c. being worse now than formerly. The fact I apprehend is, that from our more refined notions, we are become worse to please; and if matters go on in the right line, we shall every day become nicer and clearer in our judgments of stock, as well as other things. How is it probable that we should lose our best breeds of cattle? or that our domestic animals should decline in real value? when such a laudable spirit for the breeding of good stock every where prevails, and such an encouragement to it; for, though our corn-markets keep fluctuating, and of late years have been in common below par in the north and east parts of Britain, in proportion to the great advance in the rents of farms, yet the value of black cattle and sheep have kept progressively advancing; so that the importation of live cattle from our sister-kingdom, had not such a material effect as might have been expected.—But, to return to the breeders in Galloway, and even supposing their breed of cattle in some degree lost, yet there is little doubt not only of its being recovered, but still more improved, when such a leading nobleman as lord Selkirk is among the breeders. Mr. Murray of Broughton, and mr. Herring of Corrough-tree, have been long very eminent in the breeding of Galloway cattle. Mr. Craik, mr. Dalyell, and several others, have tried a cross from mr. Bakewell's bulls; but how far this has succeeded, I have not yet been able to learn: indeed I do not see how they can judge themselves without a fuller trial. But I found that the generality of the breeders were

against crossing with mr. Bakewell's or any other kind of cattle, believing that their original polled breed had already been injured from crossings with different kinds.

Though the generality of their cattle are polled, yet they have several with horns, which they say are a bastard or mongrel breed, from crossing with long-horned bulls from Westmoreland and Cumberland. They prefer the polled ones, and of these the black or dark-brindled ones, to any other; and all allow them to be the original breed of the county, The general weight of their steers or oxen, is from forty to sixty stone, some reach seventy and upwards.

Kiloes, or highland cattle, according to our arrangement, are the next to be treated of.—These hardy animals are in possession of all that extensive and mountainous country called the Highlands of Scotland, together with the islands bounded on all sides by the sea and the Grampian hills, which, as I understand them, begin on the north side of the Frith of Clyde, and run into the east sea near Aberdeen. All the lowlands of Scotland, except Galloway, which we have already treated of, have a mixed breed of cattle. Towards Cumberland, they are half long-horns, half polls. On the borders of Northumberland, they are mixed with short horns, until you reach near Teviotdale, when they become altogether a coarse kind of short horns, or what the Yorkshire jobbers call runts; except a few pretty good short-horned cattle bred in that pleasant and fine country the Tweed-side, This same kind of runtish coarse breed, continues all the way to the Frith of Forth. Crossing this narrow sea into Fifeshire, you would at first imagine the Fife cattle a distinct breed, from their upright white horns like a welch ox, be-

ing exceedingly light-lyered and thin made; but I am pretty clear it is only from their being more nearly allied to the kiloes, and consequenty less of the coarse kind of short horns in them. The cattle all along this coast continue to change more and more, growing still less until upon the edges of the mountains they become quite kiloes, but still much inferior to that pure unmixed valuable breed of kiloes which we meet with in the more northern and west Highlands, and all the islands, but particularly the Isle of Skye, and that tract of country called Kintail. It is in these two noted places that you meet with the native breed of kiloes, a hardy, idustrious and excellent breed of cattle, in every respect, calculated to thrive in a cold exposed mountainous country. When these are taken south and grazed, they both feed very readily, and afford remarkable good beef: their colors are black, brindled, or dun, in general; but the breeders here, like the Galloway people, prefer the black ones.

Prodigious numbers of these cattle are every autumn drove to the southward. Many of them are bought up by that great dealer mr. Birkwhistle, for that western district of Yorkshire called Craven: many more are sent into Norfolk, Suffolk, Essex, and other parts of the south of England, where they are fatted, and either slaughtered at their home-markets, or sent to Smithfield. The demand for kiloes in England, is of vast importance to the nobility and gentry who have estates in the north of Scotland as the most of their rents are paid in live cattle. The weight of these cattle runs in general from twenty to thirty-five stone; some particular ones reach to more than forty.

The french or Aldernay breed of cattle, are only to be met with about the seats of our no-

bility and gentry, upon account of their giving exceeding rich milk to support the luxury of the tea-table. Indeed if it was not for the sake of method, and my believing them a distinct breed, I might have saved the trouble of naming them at all; as I imagine this breed too tender and delicate ever to be much attended to by our british farmers, for they are not able to bear the cold of this island, particularly the northmost parts of it. They are very fine-boned in general, light-red or yellow in color, and their beef generally yellow, or very high-colored, though very fine in the grain, and well flavoured. They make themselves very fat; and I never remember seeing one of them in the least subject to lyer, or black fleshed; and I have seen some very useful cattle bred from a cross between an Alderney cow and a short-horned bull.

We come now to the sixth and last distinct breed of cattle, according to our opinion, to be met with in this island,* viz. The Wild breed. These, from being untameable, can only be kept within walls; consequently, but a very few of them are now to be met with, preserved out of curiosity by some of our nobility: they are so absolutely wild, that those I have seen could not be come so near to, as to form a proper judgment of them. These were all over of a creamy or dimmish white, except the ears, which are red, their hair long and thick all over them, horns milk-white, and stand as upright as those upon a welsh bullock. As soon as we came near them, they fled to a considerable distance; then turned suddenly round, and set themselves as in battle array, facing us, knocking their horns one against another.

* *Except the Sussex and Devonshire breeds, which, as I said before, I am unacquainted with.*

We were told by the park-keeper, that they always conceal their calves from the first dropping of them, which would be very difficult to find if he was not to watch the dam early or late, when she goes privately to give it suck; after which it immediately claps down again among brakes, rushes, &c. while she steals away with great caution. We were also told that they feed well; that the beef is fine-grained, and well flavoured; and indeed their form denotes kindly flesh, from what we could judge.

I had almost forgot to observe, that when the park-keeper wants to castrate a calf, having previously well marked the place where it is hid, he goes very softly till he seizes his prey; then, after making as short work as possible, he runs to his horse (which is hooked as near as can be) and rides for his life; for, the first noise of the calf, brings not only the dam, but the whole herd instantly; and he told us that he sometimes escaped very narrowly, as it makes them quite outrageous: the shooting of them is also attended with danger.*

Having given a kind of history of the different breeds of cattle made use of in this island, we shall now, according to promise, endeavor to point out the perfections and imperfections of each. First, then, the longhorns are most remarkable for, and different from the other kinds, in the length of their horns, the thickness and firm texture of their hides, the length and thickness of their hair, size of their hoofs, and coarse leathery thick necks: they likewise are deeper made in their fore-quarters, and lighter in the

* *Chillingham in Northumberland, a Seat belonging to the Earl of Tankerville, is the only place where I have seen this curious wild breed, though I am told some others of our nobility have of them.*

hind-quarters, than the other breeds in general; they are narrower in their shape, less in point of weight than the short horns, though better weighers in proportion to their size, and give considerably less milk, though it is said to afford more cream in proportion: they are more varied in colour than any of the other breeds; but whatever the colour is, they have in general a white streak or lace along their back, which the breeders term finched. They are understood by graziers to be in general rather slow-feeders; except that particular kind distinguished and recommended by mr. Bakewell: these are said to eat less food than the others, make remarkably fat in a short time, and lay their fat upon the most valuable parts, but have little tallow in them when fed; and when used to the dairy, give very little milk. It is also observable, that this kind differs from the rest of the long-horned cattle, in having very fine clean small bones in their legs, and very thin hides. The short-horns differ from the other breeds in the shortness of their horns, being wider and thicker in their form or mould, consequently feed to the most weight but the most essential difference consists in the quantity of milk they give beyond any other breed: their being tenderer than the other kinds (the Alderney excepted) may probably be owing to giving such a large quantity of milk. Indeed they have in general very thin hides, and much less hair upon them than the other sorts (Alderneys always excepted) they also afford by much the most tallow when fattened, It is said of this kind, and, I suppose, very justly, that they eat more food than any of the other breeds: nor shall we wonder at this, when we consider that they excel in those three valuable particulars, viz. in affording the great-

eat quantity of beef, tallow and milk. Their colours are very much varied; but the generality are red and white mixed, what the breeders call flecked; and when properly mixed is a very rich fine color.

Speaking of the colours of neat cattle, reminds me of a conjecture which I shall take the liberty of mentioning. In all the accounts of cattle relative to this island, which I have seen either in deeds or law-statutes, they are called black cattle. Now, I would only ask, whether this does not strengthen that opinion of the short-horned breeds being introduced from the continent, perhaps some time after our sea-coasts and low-country was improved and inclosed? and before that period, is it not probable we had mostly the small black cattle, which still are to be met with in all the wild mountainous uncultivated parts of Wales and Scotland?

Now we will speak of the Galloway breed, or polled cattle.—This valuable breed seems to be about as much less in weight and size to the long-horns, as these are to the short-horns; but they differ most essentially from every other breed of cattle, in having no horns at all. Some few indeed (in every other respect polls) have two little unmeaning horns, two, three, or four inches long, hanging down loose from the same parts that other cattle's horns grow from, and are joined to the head by a little loose skin and flesh, and are somewhat curious. In almost every other respect (except wanting horns) these cattle resemble the long horns both in colour and shape; only they are shorter in their form, which probably makes them weigh less. Indeed their hides seem to be between the two last mentioned breeds, not so thick as the long-horns, nor so thin as the short-horns: but like

the best feeding kind of the long-horns, they lay their fat upon the most valuable parts, and their beef is more mixed with fat, or marbled, than the short horns in general.

The Kiloes come next in course. These are still less in proportion to the polled cattle than they are to the long horns. These also are covered with a long thick hair, like the polls and long-horns, and like these, their beef is fine-grained, well-flavoured, and mixed or marbled, but not so handsome on the outside of the beef when killed, and not of so bright a colour, but are often spotted with black, even upon the best parts, except when made very fat. Nevertheless, these are a most valuable breed of cattle, and better adapted perhaps to the cold regions where they are bred, than any other kind we are acquainted with. However, admiral sir John Lockhart-Ross, and some other spirited gentlemen, have tried some crosses between long-horned bulls and the isle of Skye cows. Whether this will answer the end desired or not, time will shew; but whatever the result may be, there is certainly great merit in the attempt.

As we have now gone through the perfections and imperfections of these four kinds of cattle, which I presume are the most worthy the attention of our farmers, graziers and breeders, (for I apprehend the Alderney and wild cattle are out of the question, for reasons before given) we will beg leave to make a few comparisons and observations before we conclude this subject; and in doing this we shall begin with the kiloes first, for reasons which will appear afterwards.

But, previous to that, I would observe, that though a breed of cattle may have much merit, and suit some particular districts exceedingly

well, and better perhaps than any other kind we know of, yet it would be very absurd to assert, that they would answer as well in every part of the country, or even in those parts wherein they have not yet been tried: and admitting that in some of those parts they might answer exceedingly well, yet who will pretend to say that they will suit in all?

From these considerations I think my experienced readers will readily agree with me, that though this very useful breed of little cattle suit so well upon the bleak hills in the north, as not to be in danger of being outdone by any other breed, yet that it would be very absurd to suppose they will answer to breed in those rich grounds by the river-sides, or in the fertile plains in our midland counties, better than the breeds already made use of in those parts.

Let us then leave this industrious and hardy breed in quiet possession of their own mountains, and consider how far this will hold good with the polled cattle.

Although I am very clear in what has been said about the kiloes, yet I will not take it upon me to say that the right Galloway cattle would not do in the best breeding grounds we have, because I confess that I have a very high opinion of this breed as quick true feeders, and as kindly fleshed, or excellent eating beef, by which they have established their character in the first market in the island. How they would answer as dairy cows, I cannot pretend to say, as I want sufficient information to judge from.

Since I wrote the above, I have been informed from good authority, that the polled cows are very good milkers in proportion to their size, and the milk good in quality, which certainly adds to the value of this excellent breed: that

the oxen and spayed heifers answer well for the draught. I have good authority to assert, however, as there is such a similarity betwixt the best of these, and that breed of long-horns referred to before, and recommended by mr. Bakewell, we will leave them, and go to these long-horns; but not without first wishing that proper trials were made with these, and between these, the long-horns and short-horns, by breeders of judgment, experience, and attention in the different breeding counties in this island.

We shall now return to these two breeds of cattle, the long-horns and short-horns, that are at present in possession of the best and greatest part of this island. These two rival-breeds, between which it has long been a dispute with the breeders of both, which are the best and most advantageous, have been variously intermixed in different parts of Great Britain; but it is the two unmixed distinct breeds that we now mean to compare, and to the best of our knowledge, in the most unprejudiced manner, point out their different perfections and imperfections, and then leave the candid experienced reader to form his own judgment.

As we have already observed, the long-horns excel in the thickness and firm texture of the hide and the length and thickness of the hair, and consequently must be hardier; in their beef being finer grained and more mixed or marbled than the short-horns, better weighers in proportion to their size, and milk richer in quality: for as to their horns being longer, I do not think them either better or worse for that, and therefore do not bring it into the account. But they are inferior to the short-horns in giving a less quantity of milk, in weighing less upon the whole, in affording less tallow when killed, be-

ing in general slower feeders, and in being coarser made, and more leathery or bullish in the under side of the neck. In few words, the long-horns excel in the hide, hair, and quality of the beef,—the short-horns in the quantity of beef, tallow, and milk. Each breed have long had, and probably long may have their particular advocates; but if I may hazard a conjecture, is it not probable that both kinds may have their particular advantages in different situations? Why may not the thick firm hides, and long close-set hair of the one kind, be a protection and security against those impetuous winds and heavy rains to which the west coast of this island is so subject, while the more regular seasons and mild climate upon the east coast is more suitable to the constitutions of the short-horns or dutch breed. I would wish to be understood, that when I say the long-horns exceed the short-horns in the quality of the beef, I mean that preference is due to the particular breed of long-horns only taken notice of before, as selected, distinguished, and recommended by that most attentive breeder, mr. Bakewell; for as to the long-horned breed in common, I am inclined to think their beef rather inferior than superior to that of the generality of short-horns; and there is little doubt but a breed of short-horned cattle might be selected, equal, if not superior to even that very kindly-fleshed sort of mr. Bakewell's, provided any able breeder or body of breeders had or would be at the same pains and pay the same attention to these that mr. Bakewell and his neighbors have done to the long-horns. But it has all along been the misfortune of the short-horned breeders to pursue the largest and biggest-boned ones as the best, without considering that those are the best that pay the most money

for their keeping in a given time. However, the ideas of our short-horned breeders being now more enlarged, and their minds more open to conviction, we may hope in a few years to see great improvements made in that breed of cattle.

I have hitherto taken no notice of the irish cattle, though it behoves the breeders in that island above all others in the british dominions to pay attention to the breeding of cattle, as beef is the staple commodity of the island; and however Great Britain may have suffered, it is highly probable that the irish have been benefited by the high price their beef has born during the war with America.—I take the irish cattle to to be a mixed breed between the long-horns and the welch or scotch, but most inclined to the long-horns, though of less weight than those in England. It is wonderful to consider the numbers of cattle that fertile island produces: I have seen at one fair at Ballinasloe in the county of Rosecommon, thirty-five thousand head of cattle shewn, and half of these fat ones all bought up for the slaughter at Cork. Of late years, several of the irish breeders have bought long-horned bulls and heifers at very high prices from Lancashire, Leicestershire, Warwickshire, &c. particularly the mr. Trenches and other spirited breeders from Rosecommon and different parts of the west of Ireland, which has been of very great advantage in improving their breed. I saw some of the cattle descended from these crosses, shewn at Ballinasloe, which were greatly superior to any others shewn there.

I apprehend one great mistake that breeders in general have run into, especially in breeding neat cattle, has been in endeavoring to unite great milkers with quick feeders. I am inclined to think this cannot be done, for, wherever we

attempt both, we are sure to get neither in any perfection. In proportion as we gain the one, in the same proportion we lose the other: the more milk, the less beef, and the more we pursue beef, the less milk we get. In truth they seem to me to be as it were two different species or sorts of cattle of the same kind, for very different uses; and if so, they ought most certainly to be differently pursued by those that employ them. If the dairy-man wants milk, let him pursue the milking-tribe; let him have both bulls and cows of the best and greatest milking-family he can find. On the contrary, he that wants feeding or grazing cattle, let him procure a bull and cows of that sort which feed the quickest, wherever they are to be found. By pursuing too many objects at once we are apt to lose sight of the principal; and by aiming at too much, we often lose all. Let us only keep to distinct sorts, and we will obtain the prize in due time. I apprehend it has been much owing to the mixing of breeds, and improper crossings, that has kept us so long from distinguishing the most valuable kinds:—and if it had not been for mr. Bakewell, perhaps we might still have been groping in the dark; at least that great breeder was the first I know of who pointed out the valuable sorts, made those true distinctions unobserved I believe before this day, and has pursued them with a zeal, judgement, and perseverance peculiar to himself.

I do not suppose this doctrine to be so new as it has been unattended to, and not properly considered; for, I have heard many a man say, 'How should that cow be a good milker? she runs too much to flesh;' and so it is, while all the great milkers are invariably thin. The former are generally high-sided, light-bellied, co-

vered in all their points; and in short, in proportion as they recede from the great milking-tribe, fat compared, though kept on middling fare: while the latter will be lean upon their backs, flat-sided, low-bellied, poor and ill-looking, though much better kept than the others.

I own there is a middling kind of cows which give a tolerable quantity of milk, and also keep in pretty good condition or order; but this I apprehend does not at all militate against the above reasoning, because still those that incline the most to flesh, invariably give the least milk, and vice versa: and though many of the middling cows will make very fat when they are dried, or the milk taken from them, yet not near so quickly fat, nor so ripe, as those which give less milk and are inclined more to fat while in a milking state.

SHEEP.

The third class of domestic animals which we proposed treating of are Sheep, the breeding of which is of the utmost importance to this nation, most worthy the constant attention of the legislature, and the particular consideration of almost every farmer in Great Britain; for we have very few farms in this island, wherein sheep may not be kept to advantage, either in the stock way, in grazing, or feeding fat lambs. Mr. Pope somewhere says, 'The fur that warms the monarch, warmed a bear.' But the furs of these valuable creatures warm every class of people from the king to the beggar; employ thousands in the manufacturing of their fleeces, and whole fleets in the exportation. Every sub-

ject that his majesty has is interested in this great staple commodity, from the lord who sits upon a wool-sack, to the industrious poor who cheerfully card and spin.

The numberless flocks that are every where spread over the face of this island, from the Land's end to John-o'-Groat's house, are exceedingly intermixed and varied. Nevertheless, the original distinct breeds that I have seen, may, I apprehend, be reduced to seven, viz. 1st, the Lincolnshire breed; 2d, the Tees-water breed; 3d, the Dorsetshire breed; 4th and 5th, the two breeds we find upon the borders of England and Scotland, very different, though near neighbors, the one called the long sheep, the other the short sheep; 6th, the dun-faced breed, which is spread through the greatest part of the Highlands of Scotland; 7th, the Herefordshire breed.

In regard to these seven different breeds of Sheep, we shall pursue pretty nearly the same method we did with the cattle, after first giving a description of the Ram or Tup of what I esteem the best breed.

DESCRIPTION OF THE RAM.

His head should be fine, and small, his face white, nostrils wide and expanded, his eyes prominent and rather bold or daring, ears short and thin, his collar full from his breast and shoulders, but tapering gradually all the way to where the neck and head join, which must be very fine and graceful, being perfectly free from any coarse leather hanging down; the shoulders broad and full, which must at the same time join so easy to the collar forward and crops backward as to leave not the least hollow in ei-

ther place; the mutton upon his arm or fore-thigh must come quite to the knee; all his legs white and upright, with a clean fine bone, being equally clear from superfluous skin and coarse hairy wool from the knee and hough downwards; the breast broad and well forward, which will keep his fore legs at a proper wideness; his girth or chest full and deep, and instead of a hollow behind the shoulders, that part by some called the fore flank should be quite full; the back and loins broad, flat, and straight, from which the ribs must rise with a fine circular arch; his belly straight, the tail well set up, quarters long and full, with the mutton quite down to the hough, which should neither stand in nor out; his twist deep and full, which with the broad breast will keep his fore-legs open and square; the whole body covered with a fine thin rosy pelt, and that with a fine long, bright, soft wool.

We shall now proceed to the first, or Lincolnshire breed. This fertile county, as I have said before, has the same right I suppose to be called the mother county or country for long-wooled sheep, that Lancashire has to long-horned cattle: But the comparison may be carried further; for as this last-named county, from paying too much attention to big bones, hide and horns, suffered the Leicestershire and Warwickshire breeders to steal from them their valuable breed above referred to, before they were well aware of it; so also the Lincolnshire breeders, by too great a fondness for heavy wool and large-boned sheep, suffered the same discerning set of breeders from the midland counties, to rob them of a much more valuable breed of sheep, which they undoubtedly were first in possession of, before they were well sensible of the value of them.

It is true that the Lincolnshire breeders can boast of clipping the greatest weight of wool from a given number of sheep, of any other set of people in this island; but then this very heavy wool seldom or never fails to cover a very coarse-grained carcase of mutton; a kind of mutton well known for its large grain and big bones in the London markets, which not only sells for less money by the pound in the metropolis than any other kind of mutton, but in every market in the island wherever they happen to be exposed for sale, and has brought an odium upon the large mutton which the best kinds do not deserve.

It is very well known that the mutton of that breed of sheep first introduced by mr. Bakewell, and now spread over most parts of the island, is as remarkable for the fineness of its grain, as the Lincolnshire sheep are for coarse grain; the former is also as fine-flavored and sweet as a mountain sheep, possessing most of the good qualities of these breeds without their bad ones: yet this is not the worst of it, for the former kind of sheep cannot be made fat in a reasonable time in any part of the island except Romney-Marsh, their own rich marshes in Lincolnshire, or some very rich grazing grounds. Perhaps this is the best reason we can give for a set of sensible men so long adhering to this coarse-grained slow-feeding tribe. Indeed the prodigious weight of wool which is annually shorn from these sheep, is an inducement to the marsh-men to give great prices to the breeders for their hogs or hogerils (as they are there called) which though they must be kept two years more before they get them fit for market, yet in the mean time they get three clips of wool from them, which alone pays them well in those rich marshes.—

However, I am very glad to find that the prejudices of the Lincolnshire breeders are now giving way to their better informed reason, as many of the great tup-breeders in Lincolnshire are now hiring and buying rams from the midland counties; which is certainly the best, readiest, and only method to recover that valuable breed of sheep of which they were first in possession, and which they of any other county of Great Britain can make the most advantage, from having the greatest quantity of rich sheep pasturage.

After what has been said, will it not appear very extraordinary, that not only the midland counties, but Yorkshire, Durham, and even Northumberland, can send their long-wooled breed of sheep to market at two years old, fatter in general than Lincolnshire can at three. It is a matter of fact, however; and I have no doubt of clearing it up to the satisfaction of my unprejudiced readers in a few words.

The rich fat marshes in Lincolnshire are beyond any other county I know of in the island, best adapted to the growing and the forcing of long heavy wool. This, with the high price that kind of wool had given previous to the late war, very probably induced the sheep-breeders of that county to pursue it so ardently in preference to every other requisite, that they neglected the form of the carcase and inclination to make readily fat; essentials that the other sheep breeding counties were under the necessity of attending to, or otherwise they could not have got them fat in proper time, from their land not being in general near so rich as the Lincolnshire marshes. In short the Lincolnshire breeders, by running so much upon wool and large bones, lost the thick firm carcase, broad flat

back, fine clean small bone, and inclination to make fat; those distinguishing characteristics of our best sheep, and for which the Leicestershire breed is so eminently conspicuous, the introduction of which reflects so much merit upon mr. Bakewell, who first saw the advantages attending this most useful breed, and who has so steadily pursued it that he has now established them in almost every corner of these islands; for notwithstanding this breed originated in Lincolnshire, the honor was reserved to mr. Bakewell, of improving it to a pitch unknown in any former period.

The Lincolnshire sheep were become like their black horses; two great ends with a long thin weak middle. But they have another breed of sheep in Lincolnshise, which I believe are now much worn out, still worse than the other, and from whence they had them will not be easy to make out. It is more than probable the large breed has come from the continent, as well as the short-horned cattle; but these seem all their own: however we have none like them in this island that I know of, except what have sprung from Lincolnshire. The sort I refer to are absolutely dwarfs: every feature is expressive of that disagreeable deficiency so strongly marked in the dwarfs in our own species; nor should I have named them here but as a matter of curiosity: however they are well known in that county, and go by the name of Dunkies or Tunkies, perhaps a corruption of the word tonquin, from which the chinese pigs are vulgarly called Tunkies.

It is necessary to observe, that though we give the honor of the heavy wooled sheep's origin to Lincolnshire as I have said before, yet I look upon those to be only variations of the same

breed, which are spread through most of our midland counties, particularly the marsh-land in Norfolk, the isle of Ely, Northamptonshire, Rutlandshire, Leicestershire, Warwickshire, part of Oxfordshire, Gloucestershire, Staffordshire, and Derbyshire, Nottinghamshire and the south parts of Yorkshire, with all the Yorkshire wolds: but when we come north towards the river Tees which divides Yorkshire from the county of Durham, we there find that largest breed of sheep, in this island always called the Tees-water breed.—This kind differs from the Lincolnshire, in their wool not being so long and heavy, in standing upon higher though finer-boned legs; yet supporting a thicker, firmer, heavier carcase, much wider upon their backs and sides, and in affording a fatter and finer grained case of mutton. These sheep weigh from 25 to 45 lb. per quarter, avoirdupois; some particular ones have been fed to 50 lb. and upwards. But mr. T. Hutchinson of Smeaton, an eminent breeder and grazier near the river Tees, fed a wether-sheep, which was killed about Christmas, and weighed no less than 62 lb. 10 oz. per quarter, avoirdupoise; such an extraordinary weight as was never before heard of in this island by several pounds per quarter. The ewes of this breed generally bring two lambs each season, and sometimes three, four or even five.—But, speaking of the fecundity of these sheep, puts me in mind of an account I had from a correspondent in regard to the fruitfulness of a ewe belonging to an acquaintance of his, which I will beg leave to transcribe in his own words, for the satisfaction of the curious part of my readers.

Mr. E. Edison's ewe, when two years old, (viz.) In 1772, brought him 4 lambs; in 1773, 5; in 1774, 2; in 1775, 5; in 1776, 2; in 1777, 2.

N. B. The first nine lambs were lambed within eleven months.

It is only right to observe, that this large breed of sheep are not adapted to live in large flocks, or upon bare pastures; they require good ground, lying thin on, viz. few together or in small parcels, and great indulgence in winter. Accordingly we find, that in the fine tract of country by the Tees, where these sheep are principally kept, the land is in general good, well sheltered, and cut into small inclosures, where they keep a very small number in the same field, allow them to go to a hay-stack all the winter, or to hecks or sheep-racks well supplied in the field, and very frequently give the ewes corn in troughs previous to their lambing.

The Dorsetshire breed of sheep come next before us, and are said to bear lambs twice yearly. But I am inclined to believe this is a mistake; for, admitting that they may bring lambs twice in one particular year, yet they cannot well do it the next year, or for a succession of years; or at least if they suckle their lambs, I think they cannot; because when it is considered that a ewe goes with lamb twenty-one weeks, she must consequently have only ten weeks to suckle or feed her two different breeds before she takes the ram again, which will scarce suffice*. But the peculiar property of this curious breed of sheep, and what

* *Since I wrote the above I have been informed by a correspondent, that the Dorsetshire ewes are capable of bearing lambs twice a year; because my friend tells me, from a peculiarity in their constitutions, they will take the ram two days after lambing, but do not conceive: however eight days after that, they have a second embrace, when they most generally prove with lamb, notwithstanding they give suck at the same time.*

makes them exceedingly convenient and advantageous to breed from, is, that you can have them to lamb at whatever season of the year you choose, so as to have that particular kind of fat lamb called house lamb, which is so early found at the tables of our nobility and gentry, and even among our tradesmen in these luxurious times, and which are brought to London market by Christmas, or sooner if wanted, and after that a constant and regular supply is kept up all the winter. At their first appearance, they are frequenty sold for half a guinea, fifteen shillings, and sometimes more, per quarter; from which time they lower gradually in price until the spring affords plenty. The lambs are imprisoned in little dark cabbins or cupboards, where they never see the light except when the shepherd suckles them upon the ewes. The ewes are fed with oil-cake, hay, corn, and turnips, cabbages, or any other green food which that season affords: these are given them in a field or close contiguous to the lamb apartments, whereunto at proper times the attendant brings the nurses, and while the lambs suck, their lodgings are made perfectly clean, and littered with fresh straw. Vast attention is paid to this, for very much depends upon cleanliness. Thus are invention and industry exerted to the utmost, to supply the wants of luxury.

It used to be said some years ago, that this most singular breed of sheep would not bring lambs so early except in the southern parts of England, and that it was much owing to a particular mode of treatment practised by the shepherds and breeders in Dorsetshire and the neighboring counties, such as heating the ewes by driving, &c. and then turning the rams to them. Others again asserted, that it was owing to the

particular herbage produced upon the Dorsetshire downs. But these imaginary notions are now all exploded, because it is well known that York, Durham, Newcastle, and even Edinburgh, are of late years supplied with Christmas house-lamb from the Dorsetshire sheep, without any particular arts being made use of. This breed of sheep are white-faced, and most of them have horns, stand upon high small legs, long and thin in the carcase, and vast numbers of them without any wool upon their bellies, especially in Wiltshire, which gives them a very uncouth appearance to strangers. They produce a small quantity of wool; but that is very fine in quality, though it varies in different districts. The mutton of these sheep is also very sweet, and well-flavored. The variations of this breed are spread through most of the southern counties; but the true kind is only to be found in Dorsetshire and Wiltshire. There is a breed not unlike these, in Norfolk and Suffolk, which they fold on their fallows, but they are all grey or black-faced, and most of those I have seen in the west, viz. Gloucestershire, Worcestershire, Herefordshire, &c. though some of them, very different from the Dorsetshire, are I apprehend only variations of this breed, which variations continue northward until they are lost amongst those of the Lincolnshire breed.

They have a particular breed of sheep, mostly horned, in that western part of Yorkshire adjoining Lancashire called Craven, and the Sundales. I know not which breed to annex them to, but I think they have a good deal of the Dorsetshire in them, especially their horns and white faces.

After leaving these, to the northward, we first meet with that hardy, black-faced, wild-

looking tribe, which in the borders are called the short sheep, in contra-distinction to that other border-breed which we shall next treat of, and generally known by the appellation of long sheep. The short kind, then, we have observed, begin somewhere in the northwest of Yorkshire, and are in possession of all that hilly or rather mountainous tract of country adjoining the irish sea, from Lancashire southward, to Fort-William northward. Indeed their migration into the Western Highlands of Scotland, has only been of late years; nor is there the least doubt of their answering equally as well in the mountains of Argyleshire, as in those of Westmoreland and Cumberland: for, it is well known, that the climate is pretty much the same in all that rugged coast, having almost uninterrupted rains and strong winds. Indeed the Galloway and Ayrshire sheep are in some degree different; but I take it only to be a variation probably from crosses between these and the long sheep. But, within these few years, they have in these two counties been making some trials of that most useful kind of sheep, best known by the name of the Dishley's breed; and every friend to his country will be glad to hear, when I now inform him that they have hitherto succeeded beyond expectation. Nor will any person conversant with breeding sheep, be surprised at this; because they are in every respect as well or better calculated to thrive in the flat country and lower hills, as the black-faced ones are for the mountains.

This hardy race differ from our other breeds, not only in their dark complexion and horns, but principally in the long coarse shagged wool which grows upon these mountaineers. The fleece is like the hair growing upon a water-

spaniel, and is seldom sold higher than from 1 1-2d. to 3d. per lb. Their eyes have a very fierce wild cast: they run with astonishing agility, and seem quite adapted to these heathy mountains that run along all the west of Scotland, and the northwest of England: they are seldom fed until they be three, four, or five years old, when the mutton is said to be excellent, and gravy high-flavored. The three great fairs for these sheep, and where amazing numbers of them are sold every year, is Stagshaw-bank in Northumberland, Appleby in Westmoreland, and Linton in Scotland. I have been told that they have been trying this breed in those remote parts to the north of the Murray-Frith, viz. Ross-shire, Sutherland, and Caithness; nor is there a doubt of their answering better than the kind they have, which are the last breed in our arrangement, and which we shall describe by and by.

But first let us give some account of the long sheep, which though next neighbors to the short ones, are almost as different from them as sheep from goats: for, as the latter are horned, black-faced and black-legged, coarse shagged open wool, with very short firm carcases; the others, on the contrary, have long thin carcases, thick planted fine tender wool, white-faced, white-legged, and without horns. Indeed some few of these are speckled in the face and legs; but those re a mixed breed from the two kinds being probably crossed at different times where they have been so very long neighbors: for, as you leave the heights of Annandale to the eastward, you insensiby lose the short sheep and mixed breed; after which, all those extensive fine green hills on both the scotch and english borders from Redwater southward, and on all sides of the

mountains of Cheviot until you join the barren heaths of Lamer-moor northwards, are covered with the long breed:—a kind of sheep in my own humble opinion, very ill calculated for a mountainous country, particularly those to the southward called Redwater sheep, which are formed more like a fox than a sheep. Indeed the fine herbage which these border-hills every where produce, supports these sheep so well in summer as to enable them the better to stand the severity of their winters. Great numbers of these sheep are sold in Yorkshire when three years old, and when fed there upon turnips, &c. have the character of what the butchers call dying to their handling, and affording good eating mutton: their wool is so light as not to weigh more than 2 1-2 or 3 lb. per fleece; however it fetches a pretty good price.—Colonel Selby of Paston, in particular, who has paid much attention to his wool, generally sells as high as 9d. or 10d. per pound. The wool of all this country, for want of home manufactories, either goes to Scotland, even as far as Aberdeen and Peterhead, or into Yorkshire, to Leeds, Bradford, &c. to the latter mostly by land carriage: But what is most extraordinary, a part of this wool, after being combed at Leeds, &c. returns into Scotland to be spun; then is conveyed back to be made into stuffs, a part of which once more returns to Scotland for the people to wear. However, the industrious North-Britons are now establishing manufactories in every corner, which I am well informed are patriotically suported by the first Nobility in Scotland; and it were to be wished that the nobility and gentry in Northumberland would imitate so laudable an example.—Such establishments would in all probability very soon prevent these very expensive and tardy conveyances.

All the low parts of Northumberland have a mixed breed of sheep between the long kind, the Tees-water, and the Lincolnshire;—in general a very tender, awkward, unprofitable breed, though much better than the kind they used to breed, which were properly enough called mugs, and were no other I presume than a larger kind of long sheep, perhaps from their better keeping in the low countries; for they were mugged or wooled into the very eyes. Some remnants of this breed that I have seen, have their wool so grown about their eyes, that the poor animals could scarce see to eat or pick out the grass.—This mug or muff, by every breeder and grazier of experience in these days, is looked upon as a certain indication of a soft, tender, slow-thriving sort, while the chearful open countenance, without any wool upon the face from the ears forward (except what is called a topping) always denotes a kindly sort, and quick feeder. However, since mr. Bakewell's breed has made its way into Northumberland, their sheep are very much improved; and they can now not only make them fat at an earlier date, but help to supply Newcastle, Shields, and Sunderland, and all those populous environs, with as fat mutton as either the county of Durham or Yorkshire; and a vast quantity of fat sheep (as well as lambs in the season) are weekly sold in Morpeth from the north,* which perhaps ranks the

* *From the north parts of this improving county, and both sides of the Tweed, because the natives of Scotland not having yet learned to eat fat mutton like the pitmen and keelmen about Newcastle, induces the borderers to send their fattest mutton to Morpeth market rather than to Edinburgh, where the consumption of mutton is very small indeed compared with Newcastle, though pretty much increased of late years.*

third market in England for quantity of stock sold weekly or annually; Smithfield first,—Wakefield second, Morpeth third.

On both sides the Tweed, the sheep are much the same but continue to grow worse northward, until we reach that extent of barren country called Lammer-moor, where the sheep seem a mixture between the long and short kinds, but mostly inclined to the latter. From hence, all along that fine coast called the Lothians, you meet with no sheep except a few to breed fat lambs from for Edinburgh-market: For our northern neighbors seem to have full employment for all their level fields to produce corn for home consumption. Even Fifeshire, Angus and the Mearns, afford few of these innocent creatures. And when we ascend the Grampian Hills, we do not find them so plentifully stocked with sheep, as the southern hills of this kingdom. Every body who has visited these mountains, must have perceived this to be owing to the pasturage being worse in quality and less in quantity than the southern hills. It is here, however, that we first meet with the sixth distinct breed of sheep that we have noticed in this island. I know nothing of the Devonshire breed, called Dartmore Natts: nor was I ever in Cornwall, or very little in Wales; but most of the other parts I have been often in. And as it may add some weight to what has been said of stock, particularly sheep, which have always been my favourite or hobby-horse, and to the breeding of which I have paid considerable attention for many years, I can assure my readers, that I have repeatedly visited most of the sheep-breeding counties in England, especially Lincolnshire, and the adjoining midland counties, where I apprehend the best and most profitable kinds of

sheep are bred, and where the breeders have been at more pains than in any other part of this island. Whatever crosses I have seen from Lincolnshire tups, in general did harm, while on the contrary the Leicestershire ones did great service. It is true, the former generally improved the wool in weight, but constantly injured the carcase in form: the sheep were longer in making fat, and the mutton worse in quality. The Lincolnshire sheep are in general a very tender kind, and unfit for most other counties. Amongst these attentive breeders I have spent weeks and months in different years, and used every fair means to gain information of the art and mystery of breeding cattle and sheep.—But, to return to the mountains of Scotland—

The breed of sheep we are about to describe, differ from the others in the smallness of their size,—many of them, when fed, weighing no more than six, seven, or eight pounds per quarter. I have heard that there is a breed of sheep in Shetland, not more than 3 or 4 lbs. per quarter; but the greatest difference is in the faces of these, being a sort of dunnish or tanned colour, and the wool being variously mixed, and streaked black, brown, red, and dun or tanned: they have no horns. Dr. Anderson, the ingenious author of the essays on agriculture, inclines to think that this breed is descended from or crossed by the spanish sheep, which he supposes might be introduced when the spanish armada suffered upon these coasts. Their mutton is very sweet, and some of the wool exceedingly fine, which, with the variegated colours, strengthens Dr. Anderson's opinion. However, I am inclined to think them too tender and delicate a breed for these mountains; and shall not wonder if they are a few years afterwards

driven out by that hardy race of mountaineers before described, and known by the title of short sheep; a breed, I apprehend, the best adapted of all others in Great Britain, for lingey or heathy mountains, and cold exposed situations; and if so, what a pity they cannot be clothed with a finer and more valuable fleece. There is no doubt but this might be improved, because it is scarce possible to make it coarser. Some trials from the Dishly breed have been made about Moffat in Annundale, at the request of that sensible and worthy nobleman the earl of Hopetoun; but I am very sorry to hear, that notwithstanding the influence and earnest solicitations of his lordship, the breeders are exceedingly averse to it,—do and say every thing they can to lessen the merit of these trials,—and like ignorant people, are quite prejudiced against every kind of sheep except their own. But, perhaps, the laudable and spirited endeavours of that active nobleman his grace the duke of Buccleugh may have a better effect,—who ever attentive to the good of his country, has also been making similar trials amongst his numerous tenants in the neighborhood of Langholm. And if no other should, I hope the industrious mr. Malcomb* will not leave this very important matter short.

THE SEVENTH OR HEREFORDSHIRE BREED.

I had divided the sheep into six distinct breeds only; but was advised to make the Herefordshire sheep a seventh species, though in my own humble opinion they are only a variation of the Dorsetshire breed; and which variation has

* *A respectable tenant belonging to his grace the duke of Buccleugh, living near Langholm.*

taken place probably from attending to the fineness of the wool, in preference to every thing else: for, why might not this variation happen in the Dorsetshire breed or kind by attending to fine light wool, as well as the Lincolnshire have varied from their kind by attending to the growing of strong heavy wool? if true in the one case, I see no reason why it may not be in the other. Indeed I have no doubt but the Tees-water or Durham sheep, were originally from the same stock or tribe as the Lincolnshire breed; but by attending to size, &c. rather than wool, they have, by pursuing that idea, become quite a different species or breed of the same kind.

But, to return to the Herefordshire sheep.—As the late worthy baronet sir Charles Turner was so kind a few years ago as to inclose me an account of this breed of sheep and management from a gentleman of that county, I cannot do better than give it in his own words.

AN ACCOUNT OF HEREFORDSHIRE RYELAND SHEEP.

QUERIES.—What sort of ground are the sheep bred on?—how are the lambs wintered—on hay or green fodder?—at what age are the sheep killed,—what weight of flesh—ditto of wool,—and common price?—how are the lambs summered—how the sheep, whether on commons or inclosures?

"Any sort of dry sound land that is healthy for other sheep: but this sort will not require so good keeping as large sheep, and will pick the fallows cleaner; I suppose double the quantity may be kept, either on fallow, stubble, or poor pasture-land.

"The lambs, when weaned from the ewes,

about midsummer, are put upon old clover and rye-grass, or dry pasture-land, and wintered the same, except snow or very severe weather, when they have a little hay or pease-halm; observe, not to give the lambs very good keeping after they have been from the ewes a month, till winter, when they will require better keeping, old clover, wheat stubble, or dry pasture; and the oftener their pasture is changed, the better.

"The wethers are generally put from the store-sheep at Michaelmas when they are past three years old, kept well during the winter, and slaughtered fat the next summer at four years old. Some turn them to feed sooner, but that is when the stock is too large for the keeping. The sheep certainly feed better at four years old than sooner, and the flesh better;—indeed they are put to feed at any time of the year that suits the owner, but should be near fat before winter (or turned off to feed as above): then they are put to turnips or good dry pasture, and changed often; sometimes kept in the house, and fed with hay and oats, with some water always in a trough by them; which last is expensive, but the mutton excellent, the weight of the flesh from 50 to 80 pounds. A Ryeland sheep that will weigh 50 lb. when good fair mutton, is often fed till he weighs 80 lb.—The store-sheep, that have the finest wool are kept lean; and the stock together, upon an average, produce about 1 1-4 lb. each sheep, worth about 18d. or 20d. per lb. last year it brought 2s. per lb. The wethers produce from 2 to 3 lb. each, and worth from 15 to 18d. per lb. If the store-sheep are better kept, they grow larger, and produce more wool, but inferior in quality."

"The lambs I have mentioned above, till they

are a year old, when they will pasture with the flock; only they should not be put in the sheep-cott by night, and, if convenient, should be kept a little better. The store-sheep, except yearlings and two-year-olds, upon the corn-farms; and where the wool is finest, are put in the sheep-cott by night, and all the year round, and their cratches filled with pease-halm, wheat-straw, barley-straw, or any other dry food, which they eat and make dung of: the dung enables the farmers to raise good crops of barley, &c. and the sheep pasture by day, on old clover and rye-grass, dry pasture, fallow, stubble, &c. but are always kept very lean, and graze quite short: when there is not convenience of putting them in the sheep-cott by night all the year, they do it from the beginning of winter till April or May, when the lambs are able to lie out by night. The ewes must be kept in by night at the eaning time, and when the lambs are very young, or the cold nights will kill the lambs, their wool is so very short; but if they are healthy, at a week or fortnight old they will bear to be out at night."

"The sheep are pastured upon commons, open fields, or inclosures, provided the land is dry and healthy for sheep, and when there is no conveniency of putting them in a sheep-cott by night at eaning time. The sheep must not be quite the finest sort of wool, but mixed with a stronger wool: it will then be more in quantity, though about 2d. a pound less in value: and if the ewes can be out of doors, the lambs bear the cold better; but if they cannot be put in the house at that time, should be seen often, and put where they are best sheltered from the cold."

Mr. Pye, a Herefordshire farmer, also told me that the store or keeping-sheep are put into cotts at night, winter and summer, and in win-

ter foddered in racks with pease-halm (straw) barley-straw, &c. in very bad weather with hay. These cotts are low buildings quite covered over, and made to contain from one to five hundred sheep, according to the size of the farm, sheep-walk, or flock kept. The true Herefordshire breed are properly called Ryeland sheep, from the land formerly being thought capable of producing no better grain than rye, being a tract of very poor land, but now found capable of producing almost any kind of grain.—They give only 12 1-2 lb. to the stone of wool, which was sold last year (1784) for 24s. and mr. Pye never remembered it being sold for above 25s. which is a higher price by much than any other wool I know of in these islands.

There is a polled breed of sheep in Devonshire, which may be an eighth sort: but as I am unacquainted with them, shall say nothing more about them. They are called Dartmore Natts. Natt is to be understood for polled, humbled, or without horns.

It is curious enough in travelling through the different counties in this island, how highly satisfied in general, and convinced, each separate district is of having the best stock; for according to the vulgar phrase, every distinct county has 'the best in England.' Self-satisfied with this narrow illiberal idea, they rest contented, without a wish for further improvement, until some one adventurer of a more enterprizing spirit than his neighbors, led on by an unknown impulse, makes his way into a distant part of the kingdom, where he unexpectedly is struck with a breed of neat cattle or sheep, &c. confessedly superior to any at home, or that he had ever seen before. After proper consideration, he buys or hires some of these, benefits the neigh-

borhood where he lives, by the introduction of a more valuable breed of animals than they had hitherto been acquainted with, which by degrees spread through the country.

The author cannot illustrate the above in a better or stronger manner, than by the relation of an anecdote concerning himself, which tho' disgraceful at the period which it happened, proves the misfortune of a narrow education and illiberal ideas. 'An elder brother of the author's and also bred to rural business more than twenty years ago, happened to take a journey into the midland counties. On his return he was relating with great candor how much better the sheep were in Leicestershire than any we had :—How, sir, replies the present writer in rather a contemptuous tone, will you pretend to say that there are any sheep to be found so good as what we have in this neighborhood ? you must not make me believe this neither !—Well, well, George, rejoins my elder and truly wiser brother, I hope to be able to prevail on my father to allow you to go up next year, and I am not afraid but you will come home a convert. The fact was that George went, and not only returned a convert, but, like must turn-coats, a more zealous advocate for the new cause than the old one.' I beg the reader's pardon for this digression ; but I was led to it by reflecting npon the absurdity of narrow minded people in all countries, and the hindrance it is to the progress of knowledge ; for I am afraid there are many at this day as wedded and bigoted to old mistaken opinions as the author was twenty-five years ago. But if the best and wisest of men have been unable to remove the prejudices and obstinate opinions of mankind; it may be asked what right has one farmer to expect to correct

the errors of his brethren be he ever so desirous? I answer, as the intention is good, it is to be hoped it may have some effect.

But, as a confirmation of what I have been saying, allow me to acquaint you with the absurd opinions of many of our more southern breeders, from whom we should reasonably have expected better, as being nearer the metropolis, from whence we look for wisdom and knowledge.

A Norfolk sheep-breeder says, sheep should be black-faced, and black-legged, and that their horns should come out forward, and turn in such a manner as you can see the ears through or behind the circle of the horns. A Wiltshire sheep-breeder, on the contrary, says, that sheep should have white faces, and white legs, and that their horns should come out backwards, in such a manner that the ears may be seen before the horns. But a Sussex breeder insists upon it that they are both wrong; because sheep should be grey faced and grey legged, and have no horns. Thus you see how perfectly different these noted people are in their opinions; and they surely cannot all be right, though they most assuredly think so. But the counties are not more variable in appearance, than the breeders are in opinion; opinions founded in absurdity and repugnant to every principal of common sense. Nay, I was told that the coming out of horns an inch nearer, or an inch further from the ears of a ram, made at least five guineas difference in his price.

On asking a butcher's wife at Bury in Suffolk, how she sold mutton?—Five-pence per lb. sir, answered she smartly. And pray, replied I, rather surprized at the high price, have you no mutton below five-pence?—O, yes, sir, rejoins

the honest woman, plenty of Lincolnshires at 4d. and 4 1-2d. but we do not account it mutton when compared with our Norfolk or Suffolk mutton. And if I dare speak out my poor opinion, they would neither of them be accounted mutton in many markets even further north in this island; the Lincolnshire, on account of its coarseness, the other on account of the thinness, and both for having too much bone in proportion to the meat. For I aver, that no large-boned animal will feed so quick, or cover so readily and thick with muscular flesh, as one with a small bone, if well formed. This is the criterion,—this is the main principal that we found our judgement upon respecting all animals which are to be fatted for the slaughter or the consumption of mankind; and we can justly say, that this judgement is confirmed by more than thirty years experience. But, notwithstanding this assertion is made with some degree of positiveness, yet we are not unconscious of its being a new doctrine to the generality of the breeders in this island, and consequently will appear surprising and strange to many old breeders and graziers or feeders. But I have not a remaining doubt, if they will only make fair candid trials, the small bones will win or gain the prize nine times out of ten, or rather every time. Nay, I am inclined to think that the fine small-boned true proportioned animal will pay 3 1-2d. perhaps 4d. while the big-boned one will only pay 3d. for what it eats, and in that proportion. When I assert this, I would wish to be understood that I mean from the time of calving or lambing, to the time of killing for the market; because, permit me to say that I look upon the grazier who buys in and feeds, and he that breeds and feeds those he breeds as two very different

people. It is the latter of these that the world is obliged to for those nice but valuable distinctions of small-boned animals, excelling large boned ones in feeding. He sees, watches, and examines the various pushes and improvements from the beginning to the ending; while the grazier who buys in his stock, is easy in a great measure how they are bred, so long as they pay him for feeding. A plain coarse ugly animal may pay him more than a fine well-made one, because he buys the coarse one at much less price in proportion, and it is of little consequence to him as an individual: but, to his country, to the community at large, it is a matter of prodigious importance, much more than has in general been thought of; because the more meat and less bone you can produce from a given quantity of pasturage, of turnips, cabbage, &c. the better surely, and the more mouths you must feed.—— Well, but give me leave to return for a few moments to the Norfolk or Suffolk mutton, or indeed any of these sheep that are to be met with in most of the southern counties; I mean all those that are formed more like deer than sheep. Do not be surprised when I tell you, that a person who has been bred amongst the sheep in the midland counties, I mean the long wool'd polled sheep in general, and has never seen any of these deer-like sheep, until by accident a drove happens to pass the country where he lives, would never take them to be sheep, but would suppose them to be a species bred between the goat, the deer, and some foreign sheep; for their legs are so very long, and their bodies so exceedingly small, which, with their large horns and low necks, gives them an appearance altogether uncouth, and totally different from the polled sheep with long wool. Last winter, 1784,

we measured the horns of some of the Norfolk and Suffolk rams, and found them from 35 to 37 inches long, following the turn of the horn, and 9 or 9 1-2 round at the root or setting on at the head; and indeed a very formidable appearance ten or a dozen of these animals make together.

Well, but we were told that these long-legg'd, long small-bodied sheep are possessed of many good qualities that the long wool'd sheep are not. In the first place, they are better travellers, which I will not deny, for many flocks travel a round of three, four, or five miles every day, from and to the fold again. This I am willing to believe, and it may also be very right; but as I never considered exercise conducive to feeding, though it may be to health, I shall not adopt this idea. They may want them to live long, and if so, they are right to give them proper exercise. Our's, on the contrary, we wish to be fat as soon as possible, or in fact never to be lean if we can help it, consequently do not care how little exercise they get.—Secondly, They say these sheep are less subject to the itch than our's. This may also be true; and from the small quantity of wool they grow, I should think them easier cured of that disorder.—Thirdly, and lastly, They excel our's in quantity and richness of gravy, what they call claret-colored gravy. This I also give up: nor do I envy them in this mutton at all, for in proportion as your mutton is fat or lean, in such ratio I believe will be the gravy; the more lean, the blacker or claret-colored; the fatter the mutton, the lighter colored and more oil among the gravy: in short, the more deer-like the sheep are, as I said before, or the more they incline to venison, I believe the higher colored the gravy is; and on

the contrary, the more they incline to mutton, the lighter colored and more oil. And further, the gravy-mutton is always open-grained and porous; the fat mutton, on the contrary, close-grained and firm.

And now, mr. reader, you shall be proprietor or landlord; I your tenant and sheep-breeder, and that in fact is my situation. I will not object to your keeping and eating that kind of mutton; and I am sure you will wish better to your tenant than find fault with him for breeding and feeding the fat kind with oily gravy: for these obvious reasons, because you have no rent to pay:—I have; therefore, though you may indulge your palate with claret-colored gravy, I am sure you will indulge me with the fat gravy and solid meat for myself and family, that the ploughmen may be able to work for turnips to feed more of this fat mutton; but above all, that I may be able to pay my rent, and keep the wolf from the door. The fact is, mr. reader, or mr. landlord, that while the venison mutton pays 3d. for breeding and feeding, the other will pay 4d. And until you, gentlemen, will make it our interest to produce the former, we certainly shall produce the latter; because it clearly is, and ever will be the interest of the farmer and breeder, to pursue that mode which turns to the best account, that culture which produces the most profitable crops, and to produce those animals which pay the most for what they eat. Ask the pitman, the keelman, the wool-comber, the weaver, the fabricators of metals, and all those various but valuable classes of manufacturers which abound in different parts of this island, which of the two kinds of mutton they prefer? would they not readily answer, take you the lean meat, large-boned, and black gravy, but give

us the small-boned fat mutton, with oil swimming in the dish? and are not these the men that make the greatest consumption in fat mutton, beef, &c.?

On going to market one day to sell our fat sheep, I was overtaken by a gentleman from Scotland. Farmer, said the gentleman, you make your sheep so fat that I could not eat the mutton. It matters not, sir, replied I, because we have plenty of customers for this kind of mutton; and allow me to say, it is very happy that the great consumption does not depend upon such as you. Upon my word, sir, said he, I believe you are very right. In exact proportion as your breed of sheep approaches to the fat kind, the mutton is not only marbled, or mixed with fat in the lean or lyer, but the mutton is covered with fat over every part. On the contrary, the other sort only covers with fat very partially on particular places, and little or none mixed with the lean: if it did, it would be a misfortune, because the gravy would be spoiled.

But I had almost forgot one reputed excellence of the gravy sheep: it is said they die fuller of fat on the inside. I grant they do; but dispute its being an excellence upon the whole. I will endeavor to explain myself. It is a well known fact to all experienced feeders or graziers, that those animals which lay the fat on quickest on the outside, have the least within in proportion; but then they are the very sort that pay the most for keeping; and consequently, that sort that pay the most for keeping, though they have the less fat on the inside, excel those that have more fat within, in exact proportion as they pay more in a given time for what they eat. But some will say the butcher has the most profit upon those that tallow best, or lay

the fat within. I say not; because if you will allow the butcher the same profit upon the quick feeders, or those that put the fat upon the outside, he will always buy these, because he can sell two joints for one: and surely you can afford to do this to the butcher. But the fact is, the butcher can always buy these lean lumbering coarse animals, that lay little fat without, and much within, for so much less per stone that they afford him a profit. But surely this can be no inducement to either breeding or feeding them; consequently no excellence, but the contrary. Perhaps some readers may think I have dwelt longer upon these dry disquisitions than was necessary; but I flatter myself the experienced reader will excuse me, when he reflects of what great importance it is to the community at large, and individuals in particular, to breed useful rather than unuseful animals. I confess this consideration made me very solicitous to impress the idea strongly upon the minds of my brother breeders: For, if one species of wheat, of oats, barley or of turnips, &c. are better worth propogating than another, surely it will hold good in animals; and there can be no doubt that the more it is considered, the more it will be attended to.

I will beg leave to make a few remarks on beef and mutton when exposed to sale in pieces on the shambles or stall. When we consider that the difference between what is called the coarse and fine, or the best and worse parts of beef when cut up, is not less than one hundred per cent. of what vast consequence then must it be to the breeder to propogate those cattle that have the greatest proportion of these valuable parts! and if I am right in what I said before, it will follow, that the small-boned true-propor-

tioned cattle are the very sort that produce more fine than coarse, that lay their fat upon the valuable parts, and always feed in much less time than the big-boned coarse sort.

But it is not so with mutton: the difference in value between one joint of mutton and another is scarce worth naming. In different parts of the kingdom, they give a preference to particular joints; but the variation is seldom more than a farthing or halfpenny per pound at most. Nevertheless it is still right for the breeder to pursue that species which pay most for what they eat; and these, I apprehend, will always be found to be the small-boned, true-formed sheep, as described before: for, they not only produce the finest-grained mutton, but more of it in a given time, in proportion to offal, than any other sort of sheep I know of.—But in speaking of offal here, I would be understood to mean further than what the butchers generally do. By offal they mean hide and tallow only in neat cattle, or skin and tallow in sheep, and so on: but by offal in this place, I would take in not only hide or skin, and tallow, but bones, horns, pelts in sheep*, blood, guts, and garbage, and even wool and hair. And, however new the idea, I believe it will in general be found, that the truer and finer the form of an animal, the better quality and greater the quantity of flesh when fatted; and in proportion, not only less hide or skin and tallow, but less bone, horn, pelt, blood, guts, and garbage, and even wool and hair: and on the contrary, the clumsier and coarser the form, the flesh will in general

* *There is sometimes not less than* 20 *lb. weight difference between the pelts of one sort of sheep and another, between the fine thin pelt and the thick coarse gummy one.*

be of a worse quality and less in quantity when fatted; and in exact proportion, not only more hide or skin and tallow, but more bone, horn, &c.

Upon this principle, suppose two bullocks or two sheep are fatted together, no matter whether upon pasture, clover, turnips, or what you please, the one as remarkable for coarseness as the other for fineness, or in any proportion you will, it will always hold good in that proportion; and admitting the coarse one eats only as much as the other, though I have no doubt of his eating more, still a considerable part of his food must go to the support of more hide or pelt, bones, &c. while the others food is principally converted into animal flesh; which flesh, on an average, call only worth 3d. per pound, I am afraid the horns, bone, pelt, &c. are not worth above a farthing per lb. consequently a very great loss to the community. Indeed the hide of a bullock is sometimes worth as much per lb. as his flesh; and particularly firm strong hides, what are generally called leather hides, are worth more, perhaps 6d. per lb; but then these very thick hides almost generally cover a very slow feeding carcase. And though the coarse hairy wool is always worth something per lb. yet that coarse hairy wool cannot grow but upon a thick gummy pelt, which necessarily covers a coarse-grained slow-feeding carcase of mutton. The pelt itself, though perhaps from 15 to 25 lb. weight (nay some have been known to weigh 30 lb. or more) not worth more than 2d. or 3d. for the thinner the pelt, the more valuable.

The folding of sheep in many parts of this island, is looked upon as a matter of considerable consequence to the farmer. I confess I can-

not see it in so advantageous a light; but as it is a matter I have not experienced in a very great degree, I would be cautious of condemning a practice so universally used in many of the sheep-breeding counties in this kingdom. However, so far as we can go with safety, we may venture to make a few observations; and these observations I would wish to be understood as respecting single farms only, exclusive of any right of commonage, or adjacent open fields, &c.—If your farm is inclosed, or put only into shifts, or any other divisions, it matters not, we must suppose your flocks depastured upon some part of the farm, for instance say the field A, and are folded every night upon B: now I think in proportion as they enrich B, they must rob or impoverish A, or if they eat all day upon the field C, and lodge at night in D, it is the same thing, and so on wherever they eat and sleep. Only I will admit it a convenience, and a present advantage, that supposing B field fallow and intended for turnips, &c. while perhaps you have not a sufficiency of manure to spread upon it all; in that case, folding your store sheep upon the fallow, is perhaps getting you a crop of turnips where they might not otherwise be had; for well I know, that it is not easy to get turnips upon many grounds without manure, and this matter we frequently have practised, though still it is 'robbing the church to thatch the choir.' But if you have a common field, near, be doing with all my heart, and rob on, for somebody will be doing it for you if you do it not. However, if the common, open field, &c. be at a considerable distance, you perhaps lose as much as you gain; for marching sheep to and from their pasture several miles every day, must necessarily hurt them much; and if this is to

be the case, I suppose the deer-like thin sheep may be the best for this purpose, as being probably better able to bear the fatigue of travelling day by day. Nevertheless, the polled long-wooled sheep are employed on this service in different parts of this island.

The sheep-breeders upon the Yorkshire Wolds, fold these kind of sheep on their fallows in many places, from Lady day to Michaelmas. Likewise, a particular friend of mine, mr. Benjamin Sayle of Wentbridge near Doncaster, folds his ewe-flock upon both grass and fallow, and travels them about three miles a day: and few people I believe have shewn fatter sheep than he has; his ewes when fatted after having been folded while a breeding flock, as well as the descendents of these ewes. It is no uncommon thing for mr. Sayle to sell his fat ewes in the latter end of May and in June, in Wakefield market, from thirty-six to forty shillings a piece, without the wool: and I hope he will excuse me, when I say that this same spirited breeder has given mr. Bakewell as high as fifty guineas for the use of a ram for one season only.

I should not have taken the liberty of saying so much of this respectable breeder, and his valuable sheep; but because I do think he has more merit than any other sheepbreeder I know of, on account of breeding the most valuable sheep in proportion to the land they are bred upon: For every body that knows Wentbill will admit that there are very few worse sheepwalks in England, where polled sheep are kept; and those that know it not, will, I am persuaded find it so on enquiring. In my opinion, the merit of the Dishly or Bakewell's breed, has not in many places been more fully proved than under the management of mr. Sayle. It is true

that they have been most successfully tried in much colder situations, and some hundreds of miles further north, but in no place I know of where the summer pasture is of so bad a kind of herbage.

In speaking of the importance of improving the breed of these animals we have been treating of, some of my friends, in the warmth of their hearts, have been led to say, that if those animals were improved every where in this island to such a pitch as we find them (I am sorry to say) in a few hands only, and every corner of the cultivable parts of this island managed in the same spirited garden-like manner that we meet with in some small districts here and there, Great Britain would be made capable of supporting three times the number of inhabitants as at present. But, without being too sanguine, suppose we could support only twice as many more, if instead of ten we could maintain twenty millions of people, only think what an amazing affair it would be! and that this might be done in time there can be but little doubt, very little doubt indeed. If to the most spirited cultivation of the ground, and most approved methods of breeding the animals we have been recommending, equal attention was paid to floating, flooding, or watering of grass grounds in every part of this island, wherever the situation will admit, perhaps I shall not say too much if I say that there are very few parts of this island but may in some degree be benefitted by this most useful, tho' I am afraid hitherto little understood improvement, especially in the north parts of this kingdom: and many parts might have water conveyed over them, on a very extensive scale, and to very great advantage; for every little brook or rivulet is capable of being

thrown over the adjoining grounds more or less in proportion to their descent; the more descent the more land you can overflow.

This matter will perhaps appear of greater magnitude than people in general are aware of; the more it is examined; for I apprehend it may be said to lay at the foundation of most improvements in agriculture, and to be the mainspring to all the rest: because, if manure is accounted the primum mobile in husbandry, (and few people I believe will deny the truth of the observation), I apprehend it will be found that this same watering of the ground is, and may be made the source of more valuable manure than any thing else I know of. But what renders it still more inestimable is, that it draws this manure from materials which without this process would be entirely lost, or next to it; because those riches that are productive of such astonishing effects as the turning water over land has, are conveyed unobserved down those streams to the sea, and consequently lost in that vast collection of waters. Now, the watering of land in a proper manner, not only raises an amazing crop of hay, but springeatage and lattermath, edishes, fog, or foggages, as they are differently called in different parts of this island. This hay again properly consumed, makes a large annual return in dung or manure, which you can employ to great advantage on such parts of your farm as most need it, because your watered meadow requires no other help but repeating the same process as often as necessary, while it repays your expence and toil in the most grateful manner, by plentiful and certain crops of hay year after year, and, instead of exhausting, becomes richer, or more productive.

I am well informed, that upon the watered

meadows in Somersetshire; they calculate twenty shillings per acre upon the spring eatage; then grow a ton and a half or two tons of hay upon each acre, beside the lattermath or after-eatage. The way they reckon is this: an acre will keep eight ewes and lambs, which, at sixpence per week each couple, is four shillings: they eat it five weeks before laying it in for meadow, which makes the twenty shillings a decent return; this exclusive of all the rest.

But in many of the southern and south-western counties, they employ water upon their lands to as much advantage as in Somersetshire.——At Dishley, mr. Bakewell has improved a considerable tract of poor cold land, beyond any thing I ever saw, or could have conceived, by this same mode of improvement;—and, ever ready to communicate his knowledge to the public, he has left proof-pieces in different parts of his meadows, in order to convince people of the great importance and utility of this kind of improvement:—particularly, in one part he has been at the pains to divide a rood of ground into twenty equal divisions, viz. two perches in each piece. It is so contrived that they can water the first, and leave the second unwatered; or miss the first and water the second, and so on through all the twenty divisions, by which contrivance, you have the fairest and most unequivocal proofs of the good effect of improving ground by watering. And as mr. Bakewell is so kind as to shew this experimental part to any gentleman, I cannot help thinking it well worth the while of the curious, and those that have leisure, to visit this extraordinary place, where they will see many things worthy their attention and inspection beside watering meadows. And those that wish to know

the art of watering land without going to see it, will do well to read mr. George Boswell's treatise on watering meadows, low lands, &c. where they will see that matter explained in a very satisfactory manner.

It is totally out of my way to meddle with political matters; but I hope I shall not advance too far when I say it would perhaps turn to much better account, if instead of planting colonies, and conquering provinces, our great folks would turn their attention not only to the improvement of our fisheries, but in promoting the cultivation of every acre of cultivable land in these kingdoms, as well as the improvement of the most valuable breeds of animals. And in order to promote this matter to its greatest extent, it would be proper to have experimental farms in one or more parts of these islands, at the expense of government, with proper superintendants, and servants under them, to make every consistent trial in the various walks of cultivation, so as to ascertain which are the best modes; as well as a breeding farm or farms, under proper regulations, so as to ascertain, by proper trials and comparisons, which are the most valuable animals, and best worth attending to by our farmers and breeders in their different situations, in every part of these islands; because if we put the lands in this island into four divisions, viz. from nothing to five shillings per acre, from five to ten shillings, from ten to fifteen, and from fifteen to twenty, supposing whatever is above the last rent to be adapted rather to grazing than breeding and cultivation: this being the supposed case, we can only have occasion for four different species of neat cattle and sheep.—But some may naturally enough say, that there are variety of soils, such as clay and sand, &c. We

will say, that they will require five or six different species of stock; but if I was to hazard a conjecture I should incline to think that it will be found upon trial even fewer still will do.—but whoever is acquainted with, or has attended to the varieties of stock in this island, will find (I will venture to say) instead of five or six species of neat cattle or sheep, five or six and twenty variations or more of both kinds. Nevertheless, I dare say my intelligent readers will admit, that the same kinds of stock which will do upon the mountainous and high parts of Scotland, will also do upon the mountainous and high parts of Wales and England. Likewise, those sorts which suit the lower hills of Scotland and the north of England, will also suit in Wales; and I should imagine on the Yorkshire and Lincolnshire Wolds, as well as the Downs on the South of England: For, I apprehend, downs and wolds are only different names for the same kind of rising grounds: and surely those sorts of stock which will answer the end best in the low lands, plains or campaign parts in one quarter of the island, will also answer the end best in those parts in every other quarter. If this train of reasoning be just, it would seem as though we shall only have occasion for a very few variations of stock: and what these variations should be, I apprehend attention and application, joined to a few years experience, will alone discover.*

* *Since the above was printed, I find that I have been in a mistake with regard to the opinion attributed to Dr. Anderson (page 55) concerning sheep, which I embrace the first opportunity of correcting. I now understand that that gentleman believes that the native sheep of the scottish islands and northern districts of Scotland are a distinct breed, in many*

SWINE.

Swine are the fourth kind of domestic animals which we design here treating of. These creatures, though in many respects disagreeable, are of considerable importance to the community at large, and to farmers in particular; and in no instance perhaps has nature shewn her œconomy more than in this race of animals, whose stomachs seem a receptacle for every thing which other creatures refuse, or but for these would be frequently entirely wasted. They industriously gather up, and greedily devour, what would otherwise be trodden under foot and lost. The refuse of the fields, the gardens, the barns, and the scullery, to them is a feast.

The most numerous breed of hogs in this island, is that excellent kind generally known by the name of the Berkshire Pigs, now spread through almost every part of England, and some places of Scotland. They are in general reddish brown, with black spots upon them, large ears hanging over their eyes, short-legged, small boned, and exceedingly inclined to make readily fat. The surprizing weight that some of these hogs have been fed to, would be altogeth-

respects different from the sheep of Spain; and in particular, that the wool of these sheep is much more remarkable for a peculiar silky softness, than that of Spain, or any other wool found in Europe that he has had occasion to observe. This wool is to be found, he thinks, considerably finer in the filament, of a much longer staple, and not so much crisped as the spanish wool. The sheep themselves are of a much smaller size than those of Spain, and are found of various colours, as I have remarked above.

er incredible if we had it not so well attested.—Mr. Young, in one of his tours, gives an account of one in Berkshire, which was fed to 81 stone and some odd pounds, which I had often before heard of when in the south of England. But as I was some time ago favoured by a correspondent, with an account of an extraordinary pig which was killed in Cheshire, I will beg leave to transcribe it in his own words. 'On monday the 24th of January 1774, a pig fed by mr. Joseph Lawton of Cheshire was killed, which measured from the nose to the end of the tail, three yards eight inches, and in height four feet five inches and a half; when alive, it weighed 12 cwt. 2 qrs. 10 lb. when killed and dressed, it weighed 10 cwt. 3 qrs. 11 lb. or 86 stones 11 lb. averdupoise. This pig was killed by James Washington butcher at Congleton in Cheshire.'

There was a breed of large white pigs, with very large ears hanging over their eyes, which a few years ago were very common in many parts of Yorkshire and Lancashire. They were very plain thin aukward hogs, with very long legs; but what distinguished them more, was two wattles or dugs, not unlike the teats of a cow's udder, which hung down from their throats one on each side. But this unprofitable kind have now almost every where given place to the more valuable breed which we have just been speaking of, and which, like Aaron's rod, bids fair to swallow up all the rest. Indeed the Chinese or black breed will always be valuable, especially for roasting pigs and porkets; and though they do not feed to any great weight, yet they fatten amazingly fast, and afford the sweetest bacon, which has gained the preference every where amongst the nice-eating people. Indeed those that have not been accustomed to the very

fat bacon in the southern and midland counties, the very sight of it is enough to a person with a delicate stomach, who cannot behold the very fat part of it without almost sickening, while the people in those counties eat it at all times of the day : I have frequently seen them breakfast upon it.

The black breed are deservedly in great esteem, and would be much more so if they were not such a mischievous race : for the most attentive herding (or tenting, as they call it in some parts of the south) can scarcely keep them from your fields of corn, pease or potatoes ; nothing will secure them, except walls or good paling.

I know of only one other breed of pigs in these islands that I have observed, and these are the Highland or irish breed, a kind no otherwise worth naming but for distinction's sake ; for I am satisfied whoever is acquainted with the Berkshire or black breeds, will never throw those aside for these : they are a small thin-formed animal, with bristles standing up from nose to tail, and exceeding bad thrivers. We met with considerable herds of them upon the moors in different parts of the Highlands of Scotland, picking up the wild berries, especially about Thurso in Caithness.

I have seen the same kind of pigs in different parts of Ireland. It is a little extraordinary that the people of that very fine fertile island, should not have hitherto paid more attention to the breeding of stock. I have just mentioned their pigs : their cattle I took some notice of before ; therefore shall beg leave to add a few words in this place in regard to their sheep, a pretty large sample of which I saw at the great fair of Ballinasloe, where the collector of the

tolls told me that there were 25,000 shewn at that time, and that there had often been more. But I am sorry to say, that I never saw such ill-formed ugly sheep as these; the worst breeds we have in Great-Britain are by much superior. One would almost imagine that the sheep-breeders in Ireland have taken as much pains to breed plain awkward sheep, as many of the people in England have to breed handsome ones. I know nothing to recommend them except their size, which might please some old-fashioned breeders who can get no kind of stock large enough.—But I will endeavour to describe them, and leave my readers to judge for themselves.—These sheep are supported by very long thick crooked grey legs; their heads long and ugly, with large flaging ears, grey faces, and eyes sunk; necks long, and set on below the shoulders; breasts narrow and short, hollow before and behind the shoulders; flat sided, with high narrow herring-backs; hind quarters drooping, and tail set low. In short, they are in every respect contrary to what I apprehend a well-formed sheep should be; and it is to be lamented that more attention has not been paid to the breeding of useful stock in an island so fruitful in pasturage as Ireland. Indeed the same mr. Trenches mentioned before, and some other spirited breeders, have, at very great expence and hazard, imported bulls, tups and stone-horses from England; and very great improvements have already been made from these crosses. I saw some of the descendents of these sheep, from the english rams at the above fair; and it is both extraordinary and pleasing to see how much they exceeded the native breed. But a very great bar is put in the way of these is-

landers in the improvement of their sheep:—The same law is in full force against exporting sheep into Ireland, as though they were to send them to our natural enemies on the continent. I think it is a real hardship that this division of his majesty's subjects cannot have the benefit of improving their breed of sheep without smuggling them over. Application was made to lord Harcourt when lord-lieutenant of Ireland, for leave to send rams over to Ireland from England, offering very high security, three or four times the value of the ram, for its being returned to England, or, in case of death, a proper certificate to be produced along with his skin, ear-marks, &c. but without effect. However, to shew that the fault is not in the irish breeders; but, on the contrary, to prove that they are exceedingly desirous to improve their breeds of stock by the help of those from this island, even at an expence that many of our breeders in Great Britain would grumble at, I will lay before my readers an authentic account of a stone-colt and some sheep sold at Ballinasloe-fair in the county of Galway in Ireland, which was given by mr. Trench, a gentleman of fortune and character, who lives in the neighborhood of Ballinasloe, to a particular friend of mine, who was so kind as to present it to me. They were sold by auction in small lots, the 5th of October, 1770.

66 ewes sold to different people ammounted to - - - - - L.	1094	5	5
9 rams, - - - - - - - - -	352	12	6
5 ram-lambs, - - - - - -	29	0	1
1 stone-colt 3 years old - -	170	12	6
	1646	10	6

One of these rams was sold to col. Pearse at 52 guineas. 2 ewes to John Bodkin, at 46 do. 2 ditto to Bar. Rochfort at 43 do. 2 ditto to col. Pearse, at 40 do. 2 ditto to mr. Blake, at 40 do.

Since mr. Trench gave the above account to the gentleman from whom had it, I have had the pleasure of seeing him in Ireland. I also met with mr. Johnson, brother to the person who sold the above goods, who gave me the same relation of this affair as mr. Trench did.

Having now, to the best of my knowledge, and according to what I proposed, given an account of those domestic animals, in the breeding of which our farmers are so deeply interested in particular, as well as the kingdom at large, I will beg leave to add a few remarks before I proceed farther.

In the first place, then, it would seem, that the largest domestic animals are not the best or most advantageous to the breeder and feeder: because we generally find that the large big-boned cattle and sheep require more and better food in proportion to support and feed them, than those of a middling size and small bones; and the larger, bigger boned, and clumsier they are formed, the more unprofitable they are; while on the contrary, the truer they are formed, and the finer the bone, the more profitable, as they not only take less food in proportion, but feed readier. The beef or mutton is finer-grained, and sells higher by the pound: it is worth more to the consumer than the other, because it affords more and better flesh, and less bone. Nay, and supposing the poor are under a necessity of buying the coarse parts in a dear time, it is worth more to them in proportion than the coarse of the large boned ones; because, tho' still coarse,

it is finer than the others, and has less bone: in fact it is the cheapest and best eating to the rich, to the manufacturer, and to the poor.

Even in regard to horses intended for the draught or saddle, those I presume are the best in general that are of the truest proportion in respect to bone, carcase, or form, and of a middling size. It may be admitted that the great aukward lumbering horses, from 16 to 18 hands, may be the properest for drays or stage-waggons. &c. But we know that size is unfit for the saddle, the cart or the plough; and where one is wanted for the former purposes, I suppose five are wanted for the latter: perhaps from 14 to 15 hands are the most serviceable, or, to come nearer, I fancy we shall find the best from 14 hands 2 inches to 15 hands 2 inches; but perhaps it is not very easy to ascertain this to any degree of exactness, nor may it be absolutely necessary.

However, this I think we may venture to assert, that in those kinds of animals now under our consideration, and perhaps in most others, there is a certain symmetry or proportion of parts which are best adapted to a particular size in each kind. All those of each kind that are above this pitch or size, we find disproportioned according to the size they attain to; and in the degree that they are advanced beyond this line of perfection, we find them less active, less strong in proportion, and always less able to endure hardship or fatigue. We find all great horses tire sooner than middling sized ones:—they are slower in motion; they are more subject to disorders or complaints, and consequently wear sooner out.

In cattle or sheep we in general find the largest the tenderest, most liable to complaints, re-

quire more and nicer fare, are slow in feeding, and worse butcher-meat when fed; they stand winters or inclement seasons much worse than the well proportioned ones. It is these well-proportioned handsome animals that we would recommend to the attention of the breeders to choose both males and females from if possible, or as near to them as may be. It perhaps has been owing to the idea of largeness, or the wish to breed the biggest in the different kinds of our domestic animals, that has so long prevented our breeders from selecting and distinguishing the most valuable kinds: For, so universal was this idea, and so much were we blinded by it, that we did not perceive which were the most valuable animals of each kind. We had no conception of any animal being valuable or good that was not great. We did not attend to that symmetry and proportion which so essentially characterise the valuable kinds of each species, and which seldom or never fail of being the hardiest, best able to bear fatigue, and the best thrivers. In short, it was left to this age to make those nicer distinctions which constitute the able breeder and discerning judge; which the more they are attended to and examined, the more they will be pursued; and in consequence of which improved notions, our breeders must now necessarily follow those kinds that are most valuable.

Much has been said of late years about short-legged stock being the best, particularly cattle and sheep: nothing would go down once but short legs. That little short-legged dwarfish breed of sheep so much (though undeservedly) run upon a few years ago, are very properly called by a considerable breeder, an acquaintance of mine, 'the gentlemen's sheep;' for, though

to those who are not judges they have a pretty enough appearance, they will not bear examining by an attentive and able judge, I mean he who judges by his fingers as well as his eyes;—a method that is out of the gentleman's line. These originated in Lincolnshire, but are now almost entirely disused for very good reasons.

I would wish to be cautious in contradicting a general notion or received prevailing opinion; but we sometimes find the most prevailing opinions wrong. For instance, what we have just been observing of the largest and biggest-boned animals not being the best, though formerly thought so, and respecting short-legs: though I admit the propriety in a degree, I would wish to caution our breeders against the extreme. I would have them recollect the old proverb, that all extremes are wrong; and I would beg leave to observe, that the attentive breeders of this day have, I apprehend, made some notable and sensible distinctions in regard to these animals that must be fed and slaughtered for the use of mankind, viz. between what they call essentials and non essentials. They give the former title to the back and sides in particular, as well as the whole proportion of the carcase, always taking in the inclination to make fat. The non-essentials are the legs, ears, horns, tail, &c. and even wool and hides; for, though these are valuable in themselves, yet they are more to be dispensed with than the back, sides, &c. For those breeders and graziers who keep their minds open to conviction, and reason coolly, say that they have seen good carcases with thick or thin hides, under long, short, coarse and fine wool, with long, short, thick or thin horns or ears, &c. but that they never saw a good carcase without the back broad and sides round, or with-

out that proportion or symmetry in the carcase which we have endeavoured to point out in our descriptions of the bull and ram. Nevertheless, I must observe, that though they have given those externals the denomination of non-essentials for distinction's sake, they are not to be quite disregarded; because, notwithstanding they are not so essential, yet they are very often strong marks and indications of good or bad thrivers, &c. As for instance, a thick hide seldom covers a quick-feeding carcase, or a heavy fleece a ready-feeding or fine-grained case of mutton. Again, fine, small and straight bones in the legs are almost certain signs of a kindly breed, and fine grained beef or mutton, &c.—Thus we find the thick pelts and heavy wool in Lincolnshire, cover the coarsest-grained mutton that we know of; while a variation of that breed in Liecestershire, highly improved, have considerably less wool, and very thin pelts, are quicker feeders, and mutton as fine-grained and sweet as a mountain sheep.

Though it may seem very extraordinary to the incurious and unobserving, yet it is a fact well known to the attentive breeder, that in general all our best and most valuable kinds of stock in England, are found upon the middling and worst grounds, and not upon the best lands, as we should naturally imagine: and the reasons why it is so, are simple and obvious—those of the middling and indifferent tracts of country, are under the necessity of producing an industrious and thriving breed of animals: because a large tender big-boned kind could not subsist upon their keeping, or the produce raised upon such lands; while the good land makes up for every deficiency, or at least so far blinds the imagination of the unthinking breeder, that he

plumes himself upon having stock superior to his industrious neighbors, while the merit consists in the goodness of his land, and the richness of his pasturage and produce. Satisfied with his stock being the largest, he also concludes that they are the best; while his more active and industrious neighbor, from being situated in a less fertile soil, is obliged to seek out for a hardy thriving breed.—And this again makes me recur to the Lincolnshire breeders, who have so long stuck to such coarse unprofitable kinds of stock, both cattle and sheep, the pasturage in a great part of that county exceeding any other I am acquainted with in this island: for, what other county have we, possessed of ground that will through summer sufficiently support six, eight, and even ten large sheep from 18 to 24 lbs. a quarter, upon an acre, or one ox and five large sheep?—nay I was told by some Lincolnshire farmers, when dining with them at Lowth, that near to Boston (a place I never did visit) there are some grounds which maintain 15 or 16 sheep upon an acre all the summer*.

* *Since the above was written, the author has visited that rich part of Lincolnshire above referred to, and found that the common mode of stocking the pastures in that fertile district is seven sheep and half a beast per acre; that is, in other words, fourteen sheep and one beast on two acres through summer, and five sheep on two acres during winter.*

RABBITS

AND OTHER DOMESTIC ANIMALS

OF LESS NOTE.

As it may be expected from a treatise on live stock, or domestic animals, that besides horses, neat cattle, sheep and swine, something should be said on rabbits, mules, asses, goats, deer, and even poultry. For the sake of method, then, I shall beg leave to say, that though these do come under the idea of domestic animals, yet I confess myself so totally unacquainted with their respective merits, that it would be very wrong in me to attempt a history of them. Indeed, as far as I know, few of them are of much importance to farmers in general, though in particular situations I believe they may be.

OF RABBITS.

I know of large tracts of poor light soils in many different parts of this kingdom, that are employed in rabbit-warrens, and no doubt may be of great advantage to individuals as well as to the community at large; for both the flesh and fur of these little creatures are of considerable value. I was told when in Lincolnshire last year 1784, that many parts which had formerly been employed or stocked with rabbits, and then plowed for some years, were now again converted into rabbit-warrens, from their being convinced by experience that these little animals made a better return upon those poor light soils than the plough. Indeed I was told that the fur of the rabbit was now much more valuable than some years ago; and the skins of the Lincoln-

shire rabbits are particularly estimable, from their being mostly silver-greys, the down being black and white hairs nicely mixed.

OF MULES.

Mules are undoubtedly very hardy creatures, useful in many situations, and probably well worth breeding by those that understand them. I very well remember, some years ago, in an excursion through the low side of Yorkshire, seeing a fine spanish ass at Beverly, fourteen hands three inches high, kept as a stallion, and covered at no less than two guineas a mare.

OF ASSES.

Asses, though I know little of them, yet their ill-treatment has often excited my compassion. These poor creatures are abused and buffetted on all occasions, put to the greatest drudgery and hardships, and seem to be equally despised by man and beast. It is amazing how patiently they bear with the cruelest treatment, and drag out a long life, though under unmerciful loads, and most barbarous usage.

OF GOATS.

As to goats, though I live in the neighborhood of Woolert, which is famous for goat-whey drinking in the season, and in which vicinity I suppose more are bred and kept than in any other part of England, yet I confess myself very ignorant of their history. I am told that some of the sheep-breeders who occupy mountain

† *Wooler is a small market-town pleasantly situated at the foot of that fine range of mountains called Cheviot Hills in the north part of Northumberland, eighteen miles from Berwick, and is a thorough fare from London to Edinburgh.*

farms, make a handsome profit by keeping goats, and sending the whey down to Wooler in the season, when several genteel people from both sides the Tweed (as far as Newcastle one way, and Edinburgh the other) resort thither in the months of May, June, and July, not only for the benefit of drinking the goat-whey, but the fine air, and angling in the pure limpid streams that come pouring down from the mountains into a very fertile plain below. Kid is reckoned a very delicate kind of meat.*

OF DEER.

I also know very little concerning deer:—but I suppose that the different species of these animals might be greatly improved, by the simple and plain rule of selecting the best males and best females, and breeding from these in preference to the promiscuous methods which at present I am told are too much pursued: and I can have little doubt but that the best venison (as well as the best mutton, &c.) will always be found in the truest form, and along with the smallest and finest bone: and if so, how easy would it be for a nobleman or gentleman to order his game keeper to choose out a few of the best males and females prior to the rutting season, put them in a fenced place by themselves,

* *An acquaintance informs me that he has it from very good authority, that the Angora goat, which is a distinct species; that carries a thick coat of fine silky hair, greatly esteemed for certain purposes in some manufactures, thrives very well, and breeds readily in Sweden: they would of course prosper well in Britain. If they are equally hardy, and yield as much milk as the common goat, it is probable they would yield much greater profits to the farmer, on account of the superior value of their fleece.*

give the young ones a particular mark to know them from the promiscuous race; and a few years will determine whether this matter be worthy of the attention recommended. I know great stress is laid upon the pasturage or herbage they feed upon, nor will I deny its effects in a degree; yet I apprehend a right choice of the most valuable males and females of any kind whatsoever, properly attended to, bred from, and the produce depastured along with the promiscuous breed, will shew a much more conspicuous effect.

POULTRY.

Of the feathered tribe I acknowledge myself more ignorant than even of the quadrupeds I have been last treating. However, if I am rightly informed by people of nice palates, the small-boned, well-proportioned poultry, greatly excel the large-boned big kind, in taste, fineness of flesh, and flavor: and if this be the case, it would seem as though the same principle which we have all along endeavored to establish, held good through all the different classes of domestic animals which supply us with animal food, viz. That all animals of whatever kind, those which have the smallest, cleanest, finest bones, are in general the best proportioned, and covered with the best and finest-grained meat. I believe they are also the hardiest, healthiest, and most inclinable to feed, able to bear the most fatigue while living, and worth the most per lb. when dead.

APPENDIX.

weaned, or taken from the dams, they are called ewe-hogs or gimmer-hogs, until clipped or shorn for the first time, when they take the name of gimmers, which name continues only one year, until they lose their fleeces a second time, when they obtain the name of ewes, which they retain as long as they live; only, every time they are shorn, they add a year to their age, and are called two-shear, three-shear, or four-shear ewes, according to the times they have been clipped or shorn: and this holds good of all other sheep; for the age of sheep is not reckoned from the time they are lambed, but from the time of shearing: for, although a sheep is generally 15 or 16 months old when first shorn, yet they are not called shearings until once clipped, which is understood to be the same as one year old.

What we call gimmers in the north, in many of the midland parts of England are called thieves and when twice shorn, double thieves. This seems very uncouth and inconsistent to our ears, but so much for custom. There are other variations of names in different parts, which I do not recollect. In some places they call the male-lambs heeders and the females sheeders; and in others, two-year-old ewes are called twinters, and three-year-olds thrunters.

The general name of the male in neat cattle, is Bull. During the time he sucks, he is called a bull-calf, until turned of a year old, when he is called a stirk or yearling bull; then a two, three, or four-year-old bull, until six, when he is aged; but when he is castrated or gelt, he is called an ox or stot-calf, until a year old, when he is called a stirk, stot or yearling; then a two-year-old steer; and in some places a twinter;—at three, he is called a three-year-old steer; and

at four, he first takes the name of ox or bullock, though formerly I believe the castrated male was not called an ox or bullock until six years old*, when he is looked upon to be at the best, though some people think an ox improves until seven, eight, or even nine years old.

The general name of the female of this kind is cow: while sucking the dam, she is called a cow-calf, quey-calf, or heifer-calf; then yearling quey or heifer; then a two-year-old quey or heifer, or twinter; the next year a three-year-old quey or heifer; and when four, she is first called a cow, which name is retained till the last. If castrated or spayed, she is called a spayed or cut heifer, or spayed or cut quey in the north parts of the island.

A stone-horse or stallion is what we distinguish the male of the horse-kind by: while sucking, he is a foal or colt-foal, then a yearling colt,† afterwards a two and three-year-old colt, until four, when they are most commonly called horses, which name holds through.

The female of this breed is called a mare: when sucking, a mare or filley-foal, then a yearling-filley, afterwards a two and three-year-old filley, and at four she becomes a mare.

Of the pig-tribe the male is called a boar or brawn, the female a sow, the castrated male a hog-pig, the cut or castrated female a gelt or gaut.—Pigs or swine are common names for the whole tribe.

* *I apprehend the taking the name of ox or bullock, at four instead of six years old, has taken place since the drawing or working of oxen has been so much disused.*

† *In some places a colt from one to two years old is called a stag.*

APPENDIX NO. II.

Of the time the different Domestic Animals shed their teeth, and the rules for knowing their age.

NEAT Cattle cast no teeth until turned two years old, when they get two new teeth: at three they get two more, and in every succeeding year two, until five years old, when they are called full-mouthed, though they are not properly full-mouthed, until six years old, because the two corner teeth, which are the last in renewing, are not perfectly up until they are six.—It may also be worthy of notice, that the first wrinkle upon the horn does not take place until three years old, after which they get another circle or wrinkle every year as long as the horn stands on, though not always equally discernable in all horned cattle; and I am sorry to say, that it is too common for jobbers and cow-dealers to scrape rasp, or file down these wrinkles in old cattle, to prevent the age being known, and by that means to deceive and impose upon the unwary, ignorant, and unsuspecting.

A horse does not cast or renew any of his teeth until between two and a half and three years old, when he casts two above and two below* Between three an a-half and four years he casts four more, viz. two above and two below; and between four and a-half and five years old, he casts the remaining four, which are cal-

* *Neat cattle and sheep have no teeth in the upper jaw before, but only in the under jaw, while the horse tribe has both above and below; indeed the former chew the cud, but the latter does not.*

led the corner-teeth. It is remarkable that the eight first teeth which the horse renews, make all their growth in about 15 days, while the four last or corner teeth take about a year and a half to make their full growth. The four first teeth he renews, are called nippers or gatherers, the next four are called separaters, and the four last are the corner teeth, which also contain the black mark by which the dealers can so well distinguish the age of a horse. And some may think that I ought to say something of this matter here; but those that want to be acquainted with this doctrine, need only consult Bartlet, Breeken, or any of our books upon farriery, where they will find it fully explained.—Horses have also four tusks or tushes (as the dealers call them) which stand between the fore-teeth and grinders, and usually make their appearance when a horse is about three and a half years old, but are not at their full growth until the horse be six years old.†

Sheep in general renew their first two teeth from 14 to 16 months old, and afterwards every year about the same time, until they are turned three years old, or rather three shear, to speak technically, when they become full-mouthed; for, though they have eight teeth in the under-jaw before, I believe they only cast or renew the six inside ones. However, this matter is not perfectly clear, because I find the shepherds differ in opinion, some thinking they cast only six, others again all the eight fore-teeth.

† *The above is taken from the Complete Horseman or Perfect Farrier.*

OBSERVATIONS ON THE ABOVE.

It may be observed, that sheep renew their first teeth soon after they are past one year old, neat cattle not until they are past two, and horses not until they are near three years old. And this is perfectly consistent with the wisdom of the Great Creator in all his works:—because, the horse-tribe live the longest, and are evidently meant to bear the greatest hardships: The bull-tribe the next longest; and though very useful as a beast of draught, yet not at all equal to the horse in firmness and hardiness: And the innocent sheep live the shortest time, and increase the fastest, not being intended as a beast of burden or draught, but to feed and clothe the lords of the creation.—I have heard of particular sheep living to near 20 years old,—those which the mountain-shepherds call guide-sheep, viz. old wethers kept on purpose to guide and direct the bleating flocks upon those unfrequented wilds. —I have also heard of particular bulls living more than 20 years; and I knew a horse live until 47 years. This horse had a ball lodged in his neck at the battle of Proud Preston in the rebellion of the year 1715, and the ball was extracted when the horse died in 1758. This horse was supposed to be four years old in the year 1715, consequently would be 47 in the year 1758.

Now, respecting the judging of the age of the above animals by the renewing of their teeth,—though perhaps the best rule we know of, yet I cannot think it is always to be depended on. However, in sheep, I am very certain we are liable to be misled by it; and I apprehend much depends upon being early or late lambed,

well or ill fed, and so on. Particular tups, I have frequently known to have what we call four broad or renewed teeth, when by the above rule they ought to have had only two.—A friend of mine, and an eminent breeder, mr. Charge of Cleasby, a few years ago, shewed a shearing tup at Richmond in Yorkshire, for the premium given by the Agriculture Society there, which had six broad teeth; in consequence of which, the judges rejected mr. Charges tup (though confessedly the best sheep), because they believed him to be more than a shearing. However, mr. Charge afterwards proved, to the satisfaction of the gentlemen, that his tup was no more than a shearing.

END OF MR. CULLEY'S OBSERVATIONS.

APPENDIX, NO. III.

OBSERVATIONS

Respecting the cattle imported into America, by Mr. Robert Heaton, of Throgs-neck, Westchester-County, State of New-York.

MR. HEATON imported a number of cattle from England in the year 1792, which cattle have increased in value far beyond the most sanguine expectations of the proprietor. Many people having supposed that the warmth of summer and the cold of winter, being in a greater extreme in America than in England, would cause the breed of cattle to degenerate; but experience has proved the contrary. The breed of cattle imported by Mr. Eaton, are now, in point of quality, superior to those first imported. The prices at which any have been sold are for bulls, 250 dollars each. One cow with calf, sold to Cadwallader R. Colden, esq. near Troy, for 350 dollars. Lemuel Clift, esq. Southeast District, Dutchess County, purchased a bull-calf, for which he paid 250 dollars; after keeping it four years, he sold it for 300 dollars, to a person in Cherry valley, who after a use of two or three years, sold it at public auction for 500 dollars.

The weight of those of the breed that have been fatted and killed, have been as follows:

The two imported cows were killed the one at 16 and the other at 15 years of age; their

beef only, weighed 939 pounds each, the one had 186, and the other 187 pounds rough tallow.

The following is extracted from the Morning Chronicle, April 23, 1804, which in addition to a number of instances, will serve as proofs of the superiority of the breed of english cattle to the natural breed of this country.

FAT OX.—One of the largest and fattest oxen ever killed perhaps in this country, was exhibited at the stall of John Fink, in the Fly-market, about a fortnight since. It was bred and fatten'd by mr. Robert Heaton, of Throg's Neck, Westchester: the superiority of whose cattle both for size, form and beauty, is universally known and acknowledged throughout the United States.

The following is a correct measurement of this superior animal whose age was only seven years.

	Ft.	In.
From horn to tail, - - -	9	8
Point of shoulders to hip-bone, -	5	11
Hip-bone to rump, - - -	2	9
Height from shoulder to ground, -	5	11
hip to do. -	6	0
breast to do. -	1	6
Circumference of breast, - -	8	9
of barrel by navel,	9	0
Breadth of shoulders, - -	2	0
of hip, - - -	2	9

Weight of four quarters, in neat beef, 1530 lbs. A steer of three year's old, raised and fatted on the same farm, was killed at the same time, and weighed neat beef, 1088 lbs.

From the above statement it appears that the

cattle imported by mr. Heaton have not degenerated, and that they are far superior to the cattle formerly raised in this country. In addition to the above, we are happy to state that great improvements have been made in the breeds of cattle, in many parts of this State and the States of Connecticut and New-Jersey, by crosses from mr. Heaton's cattle; and it is to be hoped that with proper attention among the farmers, our stock may soon equal that of the best english breeders.

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